JVC

SERVICE MANUAL

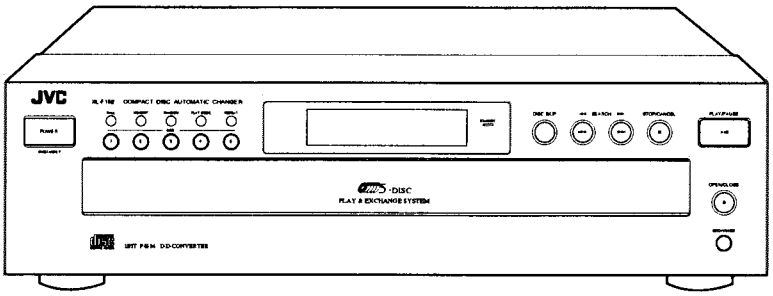
COMPACT DISC AUTOMATIC CHANGER

XL-F152BK
XL-F252BK

Area Suffix

J ..... the U.S.A
C ..... Canada

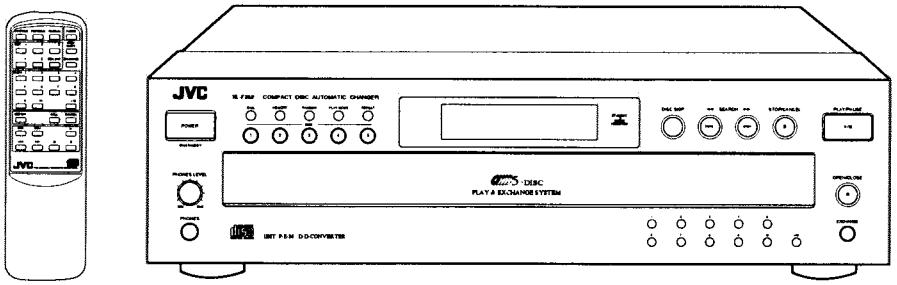
XL-F152BK



COMPACT disc DIGITAL AUDIO

COMPU LINK Component

XL-F252BK



COMPACT disc DIGITAL AUDIO

COMPU LINK Remote Control Component

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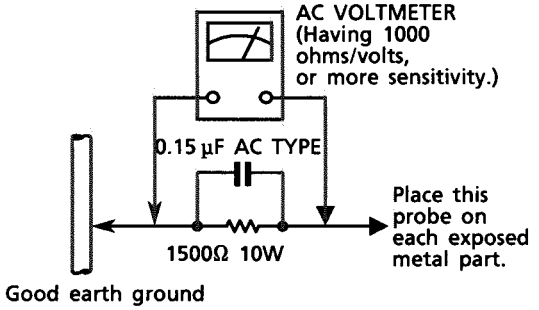
No. 20559
Jan. 1996

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 µF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION : If safety switches malfunction, the laser is able to function.
6. CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

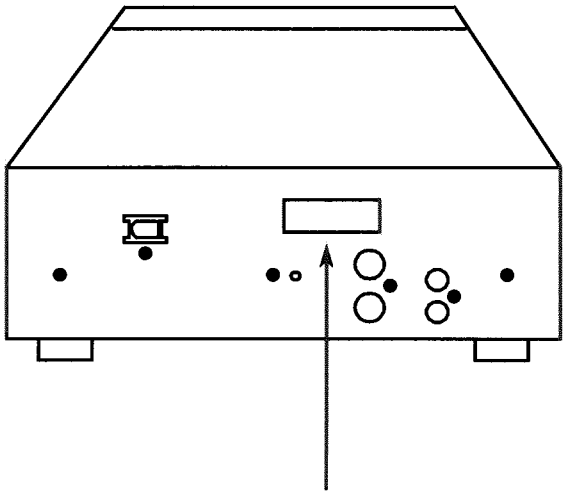
VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS



CERTIFICATION
THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR SUBCHAPTER J APPLICABLE AT DATE OF MANUFACTURE.

Troubleshooting

What appears to be a malfunction may not always be serious. Please go through the following list before requesting service.

Symptom	Possible cause	Remedy
The unit is not operative.	Power plug is disconnected from the AC outlet.	Connect the plug to the AC outlet.
	Discs are not loaded.	Load discs in the disc tray.
Playback is not possible.	Disc is inserted upside down.	Load the disc with its label-side up in the disc tray.
	Disc is not loaded in the correct position.	Load the disc according to the groove of the disc tray.
	Moisture is condensed inside the unit.	Leave the unit turned on until the moisture evaporates.
No sound from the headphones. (for XL-F252BK)	Headphones volume is set to the minimum level.	Adjust the volume with the PHONES LEVEL control.
The reproduced sound includes noise.	Disc is dirty.	Wipe off the disc surface with a soft cloth.
	Disc is warped.	Replace the disc with a new one.
The sound is intermittent.	Disc is scratched.	Replace the disc with a new one.
The remote control unit does not function. (for XL-F252BK)	Batteries are exhausted.	Replace both batteries.
	There is an obstacle between remote control unit and the remote sensor of the main unit.	Remove the obstacle.
	Direct sunlight shines on the remote sensor of the main unit.	Shade the unit from the direct sunlight.

Specifications

General

Format:	Compact disc digital audio
Signal detection system:	Non-contact optical detection
CD capacity:	5 discs
Sampling frequency:	44.1 kHz
Power requirements:	AC 120 V ∿ , 60 Hz
Power consumption:	18 watts
Dimensions (W x H x D):	435 x 128 x 391 mm (XL-F252BK) (17-3/16 x 5-1/16 x 15-1/16 inches) 435 x 128 x 384 mm (XL-F152BK) (17-3/16 x 5-1/16 x 15-1/8 inches)
Weight:	5.2 kg (11.5 lbs)

Audio performance

Frequency response:	2 Hz to 20,000 Hz (±1 dB)
Dynamic range:	More than 98.0 dB (at 1 kHz)
Signal to noise ratio:	More than 107.0 dB
Total harmonic distortion:	Less than 0.0022% (at 1 kHz)
Channel separation:	More than 94.0 dB (at 1 kHz)
Wow and flutter:	Below the measurable limit
Output level:	2.0 Vrms (at full scale)

Accessories

AC power cord 1
Audio cord 1
COMPU LINK cord 1
Remote control unit (RM-SX252U) (XL-F252BK only) 1
Battery (R6P(SUM-3)/AA(15F)) (XL-F252BK only) 2

Design and specifications subject to change without notice.

Precautions

Load compact discs only
Never insert anything other than compact discs into any part of the player.

If a problem persists
If something goes wrong, turn off the power immediately. If the same problem reoccurs when the power is turned on once more, turn off the power again and consult your JVC dealer.

Handling the power cord
When unplugging from the wall socket, always pull the plug body, never the power cable.

Volume settings
A CD player has almost zero background noise. Because of this, the technique of listening to the background level and then setting the volume before the music starts, as used with analog turntables or tape decks, cannot be used. If you raise the volume level too high, speaker damage may result.

Condensation
The CD player uses optical components. If it is moved from a cold location to a warm one, or is used in a room subject to excessive humidity or where a fire has just been lit, condensation could form on the optical components.
This may prevent the laser beam from being properly transmitted and thus causes noise or even a malfunction.
If condensation has formed and the CD player does not function correctly, we recommend that you leave it turned on for an hour or two. If at the end of this time the CD player still does not function properly, please consult your JVC dealer.

Transporting the unit
When carrying this unit, it is best to avoid either tilting it or turning it upside-down. Where you cannot avoid doing so, please remove the discs first.

Using compact discs
Compact discs are made of plastic and can easily be damaged. If the disc is dirty, scratched, warped or otherwise damaged, the digital information may not be picked up correctly.

Applicable discs
This unit can only be used with compact discs bearing the mark below. Never use discs of other types.

COMPACT disc DIGITAL AUDIO

About this manual

This manual covers the operating instructions for the compact disc automatic changers XL-F252BK and XL-F152BK.
There are several functions which require separate instructions for each model. Please check the model number stated on the carton box and follow the descriptions applicable to your unit.
Especially, please note that the remote control unit RM-SX252U is supplied only with XL-F252BK. For XL-F152BK, ignore all the descriptions on the remote control unit.

This manual is organized as follows:

The first part, "INTRODUCTION", gives you the precautions when using this unit, and shows you the names of buttons on the main unit and the remote control unit.

The second part, "BEFORE USING FOR THE FIRST TIME", tells you what kind of operations you should do before playing discs. This part describes where to place the unit for best results, how to install batteries in the remote control unit and how to connect this unit to the amplifier/receiver and other components.

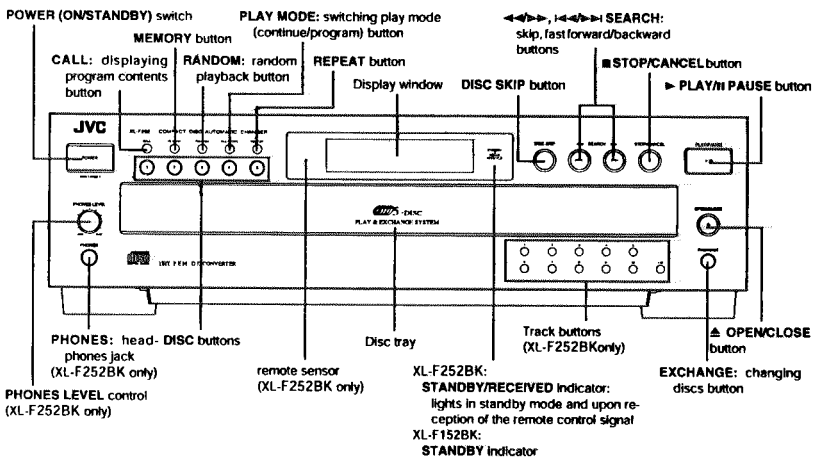
The third part, "BASIC OPERATIONS", describes how to load discs, and convenient basic functions for playing discs.

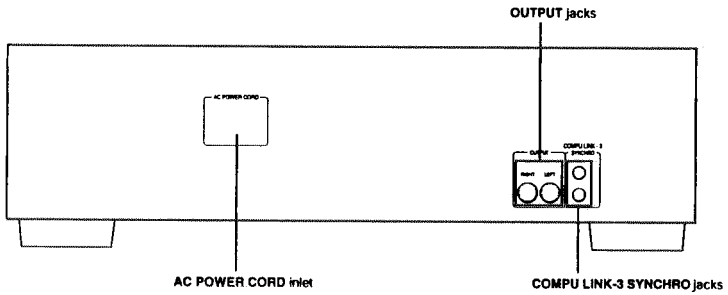
The fourth part, "VARIOUS PLAYBACK PATTERNS", describes various functions for playing discs, and convenient functions for recording.

The fifth part, "GENERAL INFORMATIONS", describes the COMPU LINK remote control system which facilitates various operations between JVC components, and explains how to take care of discs.
This part also includes "Troubleshooting", which tells you how to check the unit when a malfunction occurs, and the technical informations regarding this unit.

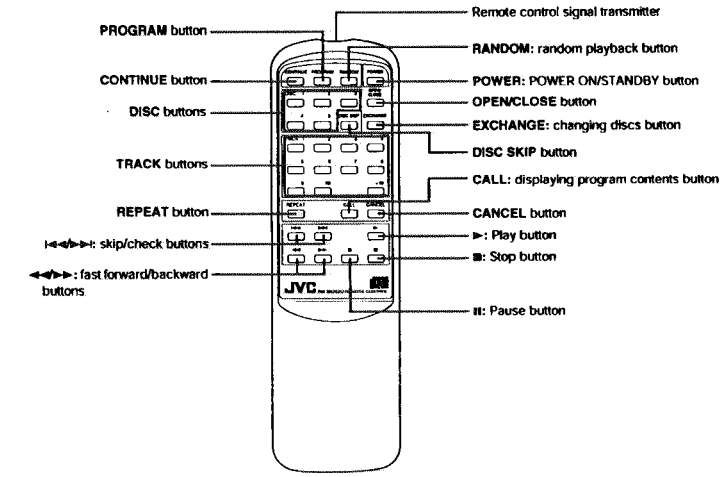
Names of buttons

Main unit

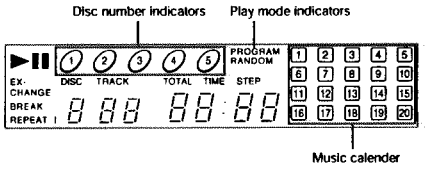

POWER (ON/STANDBY) switch
PLAY MODE: switching play mode (continue/program) button
◄◄/►►, I◄◄/►►I SEARCH: skip, fast forward/backward buttons
MEMORY button
CALL: displaying program contents button
RANDOM: random playback button
REPEAT button
Display window
DISC SKIP button
■STOP/CANCEL button
► PLAY/II PAUSE button
JVC
PHONES: head- phones jack (XL-F252BK only)
DISC buttons
PHONES LEVEL control (XL-F252BK only)
remote sensor (XL-F252BK only)
Disc tray
XL-F252BK: STANDBY/RECEIVED indicator: lights in standby mode and upon reception of the remote control signal
XL-F152BK: STANDBY indicator
Track buttons (XL-F252BKonly)
▲ OPEN/CLOSE button
EXCHANGE: changing discs button



Remote control unit (for XL-F252BK)



Display window



Notes on the disc number indicators

- When the power is turned on or the disc tray is closed with the ▲ OPEN/CLOSE button, the unit searches for loaded discs starting from the disc tray 1. When no disc is loaded, the disc number disappears from the display and unit goes on searching for the next tray.
- When no disc is loaded in the unit, "no disc" appears on the display.
- In continue play mode, when playback of one disc is finished, the circle around the corresponding disc number disappears.
- In program mode, circle appears around the disc number selected at that moment.
- When the EXCHANGE button is pressed, the indication of the disc numbers is reset to the original status and all the disc numbers (1-5) with their circle appear on the display.

BEFORE USING FOR THE FIRST TIME

Installing the unit

Best location
Select a location which is level, dry and neither too cold nor too hot (temperature range 5°C (41°F) to 35°C (95°F)). Also, avoid dusty locations or any location subject to vibration.

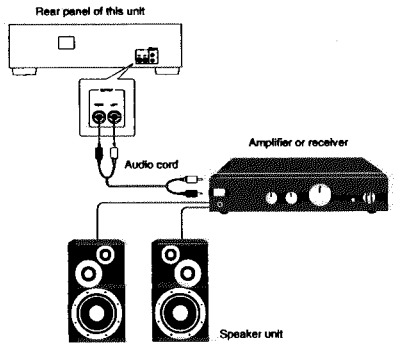
If interference occurs
If this unit is placed near a tuner or a radio receiver tuned to AM frequencies, interference may occur. If this happens, we recommend either that you move this unit as far away as possible from the tuner or receiver or briefly turn off the power to this unit.

Connecting to other equipments

Connecting to an amplifier or receiver allows you to listen to the sound from the speakers.
Connect the OUTPUT jacks of this unit to the line input jacks of an amplifier or receiver with the supplied audio cord.

Notes

- *Never connect the OUTPUT jacks to the PHONO jacks of the amplifier or receiver. This may cause damage to the components.*
- *Make sure that the same channels are connected between this unit and the amplifier or receiver: LEFT to LEFT and RIGHT to RIGHT.*
- *Do not connect the power plug until all connections are complete.*
- *Connect the plugs firmly. Loose connections may cause noise or malfunction.*

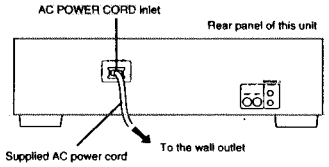


Supplying the power

To connect the AC power cord of the main unit

The AC power cord is supplied separately and must be connected to the unit.
Plug the AC power cord into the AC POWER CORD inlet of this unit and connect to the wall outlet after all connections are complete.

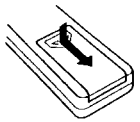
Note
When using the COMPU LINK Remote Control System, do not connect the power cord to the SWITCHED AC OUTLET of an amplifier or receiver.



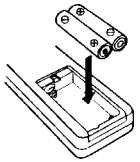
To install the batteries in the remote control unit (for XL-F252BK)

Before operating the remote control unit, install two batteries.

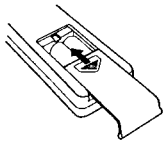
1. **Remove the rear cover of the remote control unit by pressing down and simultaneously pulling it backwards.**



2. **Install batteries. Be sure that the batteries are installed with correct polarity, (+) and (–).**



3. **Attach the rear cover by sliding it back into position.**



Notes
Incorrect use of batteries can cause corrosion or damage. Note the following points to lengthen battery life.
- *Install batteries observing the correct polarity, (+) and (–).*
- *Do not use new and old batteries simultaneously.*
- *Batteries with similar shapes may have different voltage ratings. Be sure to use the correct batteries.*
- *Remove batteries from the remote control unit if it will not be used for a long period of time.*
- *Do not expose batteries to heat or flame.*

Battery replacement

Service life of batteries depends on the condition of use; standard life is about one year. When the batteries become weak, the operating distance of the remote control unit becomes short . If this happens, replace the batteries (R6P(SUM-3)/AA(15F)) with new ones.

Note
- *The lower the temperature, the shorter the battery life.*

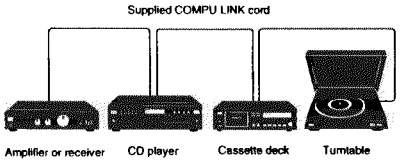
COMPU LINK connection

JVC's COMPU LINK Remote Control System provides unified control over system components connected with COMPU LINK. Connecting JVC audio components with the COMPU LINK jacks automatically controls relative operations between components and facilitates various operations. With the COMPU LINK connection to an amplifier or receiver, you can operate XL-F252BK/XL-F152BK with the amplifier or receiver's remote control unit. Synchronized recording is also available with this feature.

Connecting the COMPU LINK cord

The COMPU LINK-3 SYNCHRO jacks are used to output and input the control signal for the COMPU LINK remote control system.
COMPU LINK-compatible products are provided with the jacks marked COMPU LINK-1, COMPU LINK-2 or COMPU LINK-3, referring to the COMPU LINK version. XL-F252BK/XL-F152BK is equipped with COMPU LINK-3. You can connect XL-F252BK/XL-F152BK also to a component with lower COMPU LINK versions. But, in that case, only the lower versions' features will be available.
Plug the supplied COMPU LINK cord into the COMPU LINK-3 SYNCHRO jack on the rear panel of XL-F252BK/XL-F152BK. Plug the other end into the COMPU LINK jack of the other component. If there are two COMPU LINK jacks, plug it into either of them.

Connecting the COMPU LINK system components with the COMPU LINK cords

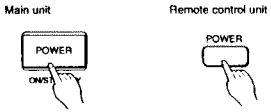


BASIC OPERATIONS

Basic functions for disc playback

Turning on the power of this unit

Press the POWER switch to turn on this unit. The STANDBY indicator is turned off and the display is turned on.



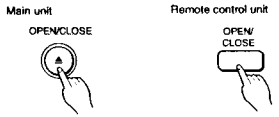
Press again to turn off the power and activate the standby mode. The STANDBY indicator is lit.

The power is automatically turned on also by;
- Pressing the ≜ OPEN/CLOSE button.
- Pressing the ► PLAY/II PAUSE button on the main unit or the ► button on the remote control unit.

Notes
- *A small amount of power (4 watts) is consumed even in the standby mode.*
- *To turn off the power completely, disconnect the power cord from the wall outlet.*

Loading discs in the disc tray

Use the ≜ OPEN/CLOSE button to open and close the disc tray.



1. **Open the disc tray by pressing the ≜ OPEN/CLOSE button.**
2. **Place discs on the disc tray according to the groove with their label side up.**
3. **Close the disc tray by pressing the ≜ OPEN/CLOSE button.**

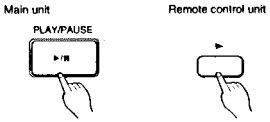
CAUTION
When loading discs in the disc tray, be sure to put the discs according to the groove. Otherwise, the discs will be damaged when the disc tray is closed, and cannot be removed from the unit.

Remote control operation (for XL-F252BK)

Point the remote control unit towards the remote sensor and operate it steadily and carefully. The remote control unit can be used within a range of about 7 meters (23 feet) from the remote sensor, and at angles of up to about 30 degrees.

Playing a disc

Press the ► PLAY/II PAUSE button on the main unit or the ► button on the remote control unit.



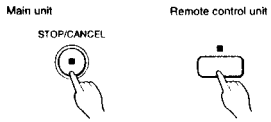
The ► indicator lights on the display and playback starts.

To stop playback temporarily, press the ► PLAY/II PAUSE button on the main unit or the II button on the remote control unit.
The II indicator lights on the display and playback stops temporarily.
To resume playback, press the ► PLAY/II PAUSE button on the main unit or the ► button on the remote control unit.

Adjusting the headphones level (XL-F252BK only)
Insert the headphones plug into the PHONES jack and turn the PHONES LEVEL control to adjust the volume level.

Stopping playback

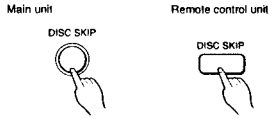
Press the ■ STOP/CANCEL button on the main unit or the ■ button on the remote control unit.



Locating a point to start playback

Skipping to a desired disc

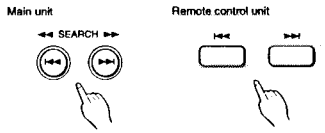
Use the DISC SKIP button.



Each time the DISC SKIP button is pressed, the selected disc number switches from 1 to 5, then back to 1.

Skipping to a desired track

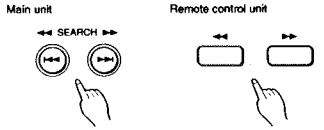
Use the I◄◄/►►I buttons.



To skip back to the beginning of the track being played, tap the I◄◄ button. When the beginning of the track is reached, tapping this button again skips to the previous track.
To skip to the next track, tap the ►►I button.
When using the I◄◄/►►I SEARCH buttons on the main unit, tap them until the desired track appears.

Searching for a desired section

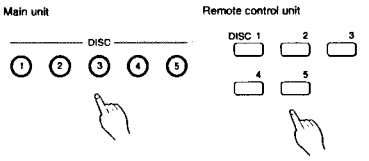
Keep the ◄◄/►► button pressed during playback.



Playback advances or reverses rapidly.
While the ◄◄ button is kept pressed, playback rapidly reverses toward the beginning of the track. While the ►► button is kept pressed, playback rapidly advances toward the end of the track. When the desired section is reached, release the button. The player resumes normal playback from that point.

Specifying a desired disc

Use the DISC buttons (1-5).

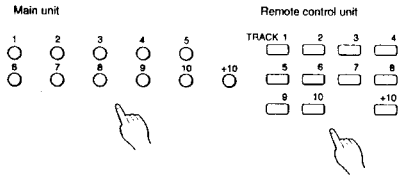


To select a disc, press the desired disc number (1-5). The unit searches for the selected disc and playback starts automatically.

Note
If no disc is loaded in the selected disc tray, the indicator of that disc is turned off within about 4 seconds and then playback starts from the next disc.

Specifying a desired track (for XL-F252BK)

To specify the desired track number, use the track buttons (1-10, +10).



The unit searches for the selected track and playback starts automatically.
When selecting track number 10 or less, press the corresponding track button. When selecting track number 11 or above, use the [+10] button.
Example: To select track number 12, press [+10] and then [2].
To select track number 25, press [+10] twice and then [5].
To select track number 30, press [+10] twice and then [10].

Note
If the selected track number does not exist on the selected disc, playback starts from the first track on that disc.

Changing discs during playback

During playback of a disc, you can change other discs in the disc tray without stopping playback.

Press the EXCHANGE button. The disc tray opens and you can change the discs inside.

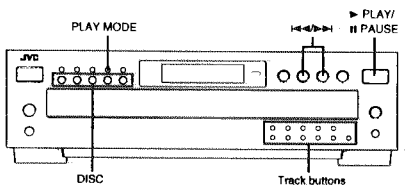
To change the discs loaded in the far end of the disc tray, press the DISC SKIP button to make the disc tray rotate.
After changing the discs, press the EXCHANGE button again to close the disc tray.

It is also possible to change the discs during program playback or random playback, following the above procedure.

VARIOUS PLAYBACK PATTERNS

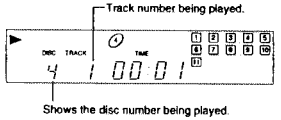
Playing tracks in a order of track/disc number

You can continuously play all the loaded discs, starting from any track on any disc.



1. **Press the PLAY MODE button on the main unit or the CONTINUE button on the remote control unit so that both the PROGRAM and RANDOM indicators are turned off on the display.**
When you want to play from a desired disc or track, go to step 3.

2. **Press the ► PLAY/II PAUSE button on the main unit or the ► button on the remote control unit to start playback.**
Playback starts from the previously selected disc.
If the disc tray is not closed, pressing the ► PLAY/II PAUSE button closes the disc tray and then starts playback.
The following display appears.

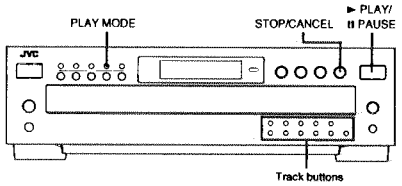


3. **Use the DISC button to select the disc number which contains the first track to be played.**
When you want to play from the first track on the selected disc, it is not necessary to select the track number.

4. **Select the track number with the I◄◄/►►I buttons or, for XL-F252BK, the track buttons.**
The selected track number appears on the display and playback starts from the selected track automatically.

Playing tracks in a desired order

You can play only the favorite tracks in any desired order.



1. **In stop mode, press the PLAY MODE button on the main unit or the PROGRAM button on the remote control unit so that the PROGRAM indicator lights on the display.**

2. **Select the disc which contains the track to be programmed with the DISC button.**
"AL" (all tracks) appears on the display.

To program the entire disc
Skip step 3 below. When the track number is not specified after selecting the disc number, all tracks on the selected disc are programmed.

3. **For XL-F252BK, select the track number by pressing the track buttons. For XL-F152BK, select the track number by pressing the I◄◄/►►I SEARCH button and then the MEMORY button.**
Refer to "Specifying a desired track" on page 9 for entering the track number. For XL-F152BK, press the MEMORY button with the desired track number shown on the display.
When the selected track number is programmed, the following display appears.

- If you want to cancel the displayed program step, press the ■ STOP/CANCEL button on the main unit or the CANCEL button on the remote control unit and then enter the new disc number and/or track number.

4. **Repeat steps 2 and 3 for other tracks and/or discs to be programmed.**
You can program up to 32 steps.

5. **Start playback by pressing the ► PLAY/II PAUSE button on the main unit or the ► button on the remote control unit.**
The programmed tracks and/or discs are played in the programmed order.

- You can skip to a desired program step with the I◄◄/►►I button.
- When the DISC SKIP button is pressed during program play, the playback skips to the next programmed disc.

To check the program contents
Press the CALL button during stop mode. Each time the CALL button is pressed, the program contents are displayed in the programmed order.
- When the unit is in program play mode, press the ■ button to enter stop mode and then operate the CALL button.

To modify the program contents
Press the CALL button until the display shows the program step to be corrected. Enter the new disc number and/or track number referring to steps 2 and 3 above.
To delete a program step, press the CALL button until the display shows the program step to be deleted and then press the ■ STOP/CANCEL button on the main unit or the CANCEL button on the remote control unit. You can also delete a displayed program step during programming.
- When the unit is in program play mode, press the ■ button to enter stop mode and then delete the program step.

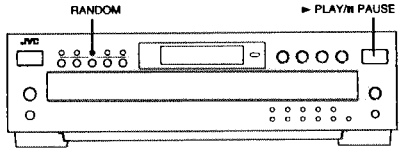
To add discs/tracks to the program during program playback
Specify the disc number by pressing the DISC button and, with XL-F252BK, the track number by pressing the track buttons.
The specified disc/track is added to the end of the program being played back.
- For XL-F152BK, only the disc number can be specified and the entire disc is added to the program. For this operation, it is not possible to utilize the I◄◄/►►I SEARCH buttons.

To exit program mode
Press the PLAY MODE or RANDOM button on the main unit, or the CONTINUE or RANDOM button on the remote control unit, and the program mode is cancelled. However, the program contents are not erased and, whenever the program mode is selected, you can play the tracks in programmed order.

To clear the program
In stop mode, press the ■ STOP/CANCEL button on the main unit repeatedly. The program contents will be cleared step by step.
To clear the entire program, press the ≜ OPEN/CLOSE button on the main unit in stop mode. The program contents will be entirely cleared, however, the program mode is not cancelled.

Playing tracks in a random order

You can select and play tracks in random order from all the discs loaded in the unit.
Selections are made so that each track is played only once.



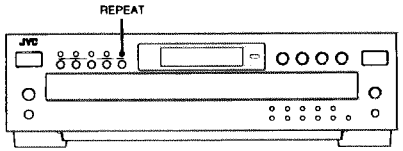
1. **In stop mode, press the RANDOM button so that the RANDOM indicator lights on the display.**
2. **Press the ► PLAY/II PAUSE button on the main unit or the ► button on the remote control unit to start playback.**

- To skip to the track to be played next, press the ►►I button.

To cancel random playback
In stop mode, press the PLAY MODE button on the main unit or the CONTINUE or PROGRAM button on the remote control unit. The RANDOM indicator goes out and the random playback is cancelled.

Playing repeatedly

You can repeatedly play all discs or one track.
It is also possible to utilize this function in combination with random/program playback function.



Repeating all discs

Press the REPEAT button so that the REPEAT indicator lights on the display.

All discs loaded in the unit are played repeatedly.
In program mode, the program contents are played repeatedly.

Repeating one track

Press the REPEAT button so that the REPEAT 1 indicator lights on the display.

The displayed track is played repeatedly.

To cancel repeat mode
Press the REPEAT button so that both the REPEAT and REPEAT 1 indicators go out.

COMPU LINK remote control system

The COMPU LINK Remote Control System controls relative operations between components automatically and facilitates various operations.

COMPU LINK
Remote
Control System

This is a system originated and developed by JVC for facilitating various system operations.
The following is a brief explanation of this system:

Automatic source selection

When the supplied COMPU LINK cord is utilized to connect this unit to others equipped with COMPU LINK jacks, switching-in of each system component can be performed with a single touch on the source selector button located on a JVC amplifier or receiver.
When selection is carried out in this manner, the corresponding unit will automatically start operation.
Upon pressing of the play button, the source selector of the amplifier or receiver changes automatically. When a new unit is switched in, the previously selected component stops operation within five seconds.

Synchronized recording

Synchronized recording refers to the process in which a JVC cassette deck starts recording, synchronized with this unit. Synchronized recording is carried out as follows:

1. Set the cassette deck to the recording pause mode in accordance with its instructions.
2. To record only certain tracks, program the tracks in any order, as desired.
3. Press the ► PLAY/II PAUSE button on the front panel of this unit. The cassette deck automatically starts recording, synchronized with this unit.

Notes

- *Synchronized recording stops automatically when this unit stops playback.*
- *To cancel synchronized recording, press the stop button of this unit or the cassette deck.*
- *To properly operate the synchronized recording, the buttons/controls other than POWER, ■ STOP and OPEN do not function.*
- *If the recording pause mode is set on the cassette deck by pressing the II PAUSE button after pressing the ● REC and ► PLAY buttons simultaneously, synchronized recording is not possible. For details, refer to the instructions for the cassette deck.*

Automatic power on/off function

This function is to control the power on/off of the receiver/amplifier or this unit respectively as the following.

- When this unit enters playback mode, the power of the receiver or amplifier is turned on.
- When the source selector of the receiver/amplifier is set to CD function mode, the power of this unit is turned on.

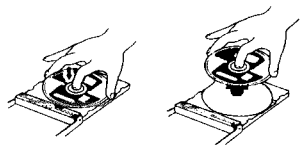
Notes

- *Abnormal operation may result if the power supply of the component(s) is interrupted. If this happens, you must start over again.*
- *Ensure that the COMPU LINK jacks of the each components are connected with the supplied COMPU LINK cord. Also, be sure to fully read the instructions for each component.*
- *When the power of the amplifier or receiver is switched off, this unit is also turned off automatically.*

Care and handling

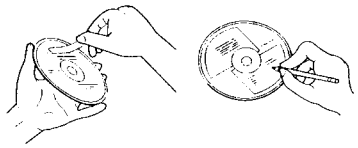
How to handle CDs

When handling compact discs, do not touch the surface of the disc (reflective silver side — the side without the label).
Since compact discs are made of plastic, they are easily damaged. If the disc gets dirty, dusty, scratched or warped, the sound will not be picked up correctly and, in addition, such discs may cause the CD player to malfunction.



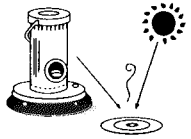
Even on label side

Do not damage the label side, stick paper to or use any adhesive on the surface.



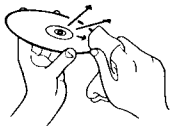
Storage

Make sure that discs are kept in their cases. If discs are piled one on top of another without their protective cases, they can be damaged.
Do not put discs in any location where they can be exposed to direct sunlight, or in any place where humidity or temperature is high. Avoid leaving discs in your car!



Maintenance of discs

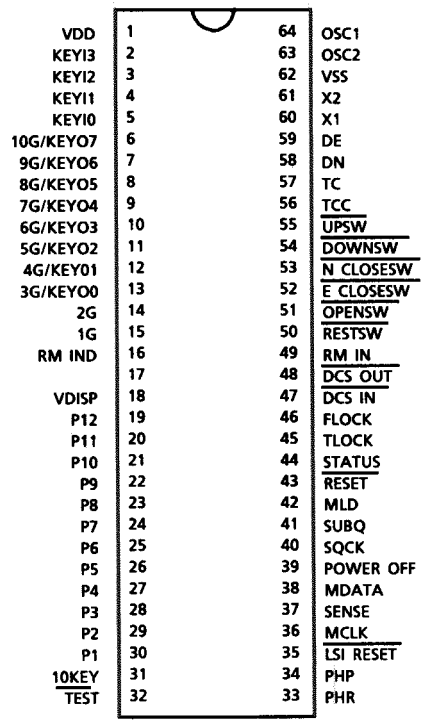
When there are fingerprints or other dirt adhering to a disc, wipe the disc with a soft, dry cloth with a movement going from the center outwards.
If difficult to clean, wipe the disc with a cloth moistened with water.
Never use record cleaners, petrol, alcohol or any anti-static agents.



Descripion of ICs

■ MN171602JYK2(IC201) : SYSTEM CONTROLLER

1. Terminal Layout



2. Key Matrix (★MARK: not use for XL-F115TN/XL-F116BK)

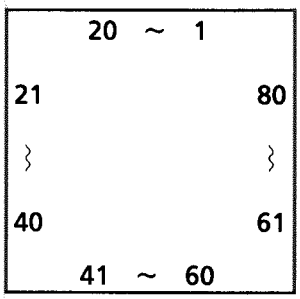
	KEY IN 0	KEY IN 1	KEY IN2	KEY IN3
KEY OUT 0	▲ (S701)	DISC SKIP (S702)	▶/❚❚ (S703)	■ (S704)
KEY OUT 1	--	⏮ (S705)	--	⏭ (S706)
KEY OUT 2	DISC5 (S728)	REPEAT (S730)	DISC4 (S729)	PLAY MODE (S731)
KEY OUT 3	DISC3 (S724)	RANDOM (S726)	DISC1 (S725)	CALL (S727)
KEY OUT 4	DISC2 (S721)	MEMORY (S722)	--	POWER (S723)
KEY OUT 5	EXCHANGE (S707)	+10 (S708) ★	5 (S709) ★	10 (S710) ★
KEY OUT 6	1 (S711) ★	3 (S712) ★	6 (S713) ★	8 (S714) ★
KEY OUT 7	2 (S715) ★	4 (S716) ★	7 (S717) ★	9 (S718) ★

3. Description

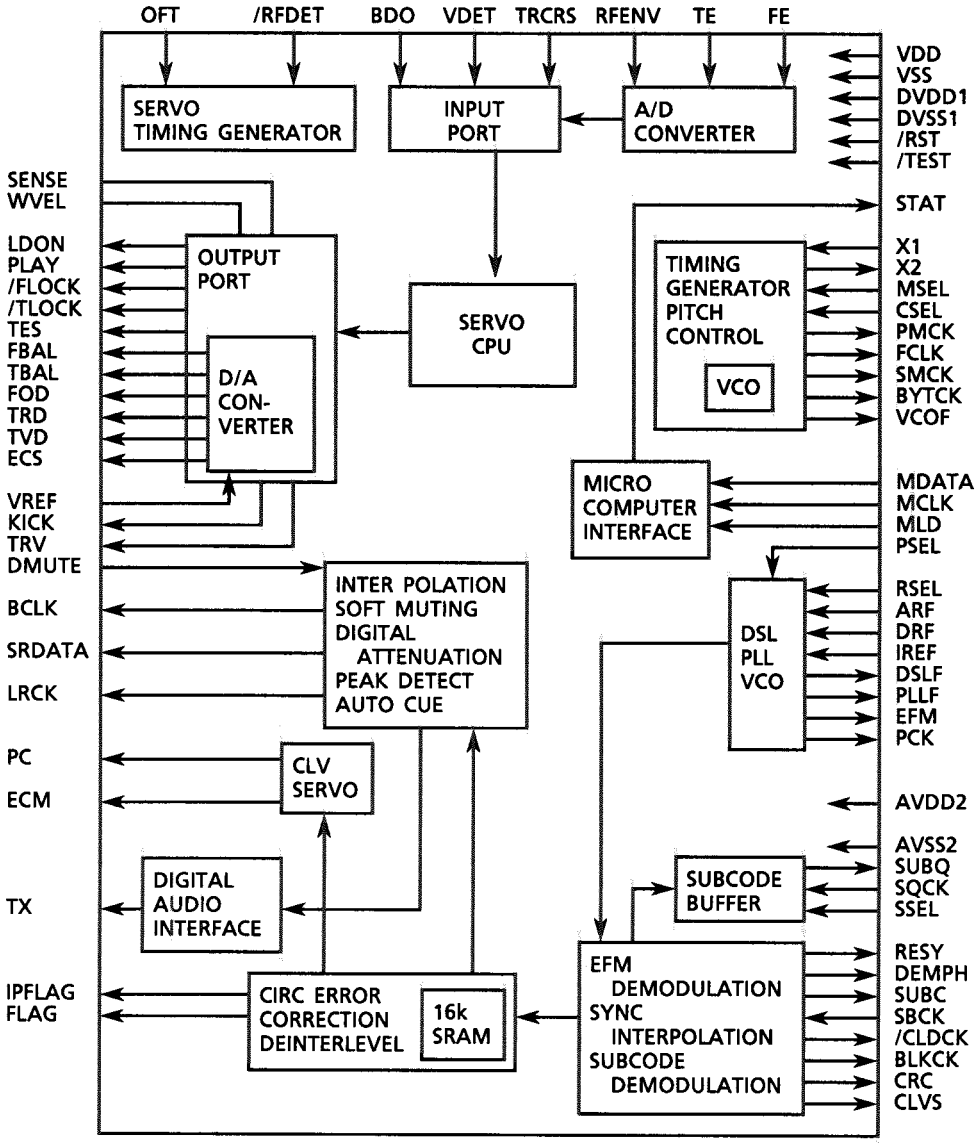
Pin No.	Symbol	I/O	Description	Pin NO.	Symbol	I/O	Description
1	VDD	--	Power supply voltege(+5V)	33	PHL	I	Detecting disc
2	KEYI3	I	Key Mmatrix input	34	PHP	I	Detecting disc number
3	KEYI2	I	Key Mmatrix input	35	/LIS RESET	O	Reset signal output
4	KEYI1	I	Key Mmatrix input	36	MCLK	O	µ-com command clock signal output
5	KEYI0	I	Key Mmatrix input	37	SENSE	I	SENSE signal input
6	10G/KEYO7	O	FL grid control output/Key Mmatrix output	38	MDATA	O	µ-com command data output
7	9G/KEYO6	O	FL grid control output/Key Mmatrix output	39	POWER OFF	O	H : power off, L : power on.
8	8G/KEYO5	O	FL grid control output/Key Mmatrix output	40	SQCK	O	Sub Q clock outpu
9	7G/KEYO4	O	FL grid control output/Key Mmatrix output	41	SUBQ	I	Sub-code Q-code input
10	6G/KEYO3	O	FL grid control output/Key Mmatrix output	42	MLD	O	µ-com command load signal output
11	5G/KEYO2	O	FL grid control output/Key Mmatrix output	43	/RESET	I	Reset signal input
12	4G/KEYO1	O	FL grid control output/Key Mmatrix output	44	STATUS	I	Status signal input
13	3G/KEYO0	O	FL grid control output/Key Mmatrix output	45	TLOCK	I	Lock signal for Tracking
14	2G	O	FL grid control output	46	FLOCK	I	Lock signal for Focus
15	1G	O	FL grid control output	47	/DCS IN	I	Compulink signal input
16	RM IND	O	Remote control	48	/DCS OUT	O	Compulink signal output
17		--		49	RM IN	I	Remote control signal input
18	VDISP	--	Power supply for FL display	50	/RESTSW	I	"L" with pikup rest position
19	P12	O	FL anode control	51	/OPENSW	I	"L" with disc table open
20	P11	O	FL anode control	52	/E CLOSESW	I	"L" with exchange close
21	P10	O	FL anode control	53	/N CLOSESW	I	"L" with nomal close
22	P9	O	FL anode control	54	/DOWNSW	I	"L"with CD mechanism DOWN
23	P8	O	FL anode control	55	/UPSW	I	"L"with CD mechanism UP
24	P7	O	FL anode control	56	TCC	O	Disc table motor control
25	P6	O	FL anode control	57	TC	O	Disc table motor control
26	P5	O	FL anode control	58	DN	O	Disc tray motor control
27	P4	O	FL anode control	59	DE	O	Disc tray motor control
28	P3	O	FL anode control	60	X1	--	GND
29	P2	O	FL anode control	61	X2	--	
30	P1	O	FL anode control	62	VSS	--	GND
31	10KEY	I	Pull UP or Pull down (XL-F115TN/XL-F116BK Pull down)	63	OSC2	--	Clock oscillation
32	TEST	--	Pull UP(+5V)	64	OSC1	--	Clock oscillation

■ MN662720RB (IC401) : DIGITAL SERVO & DIGITAL SIGNAL PROCESSER

1. Terminal Layout



2. Block Diagram

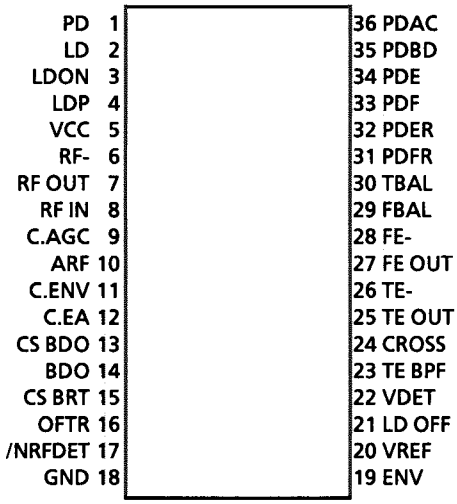


3. Description

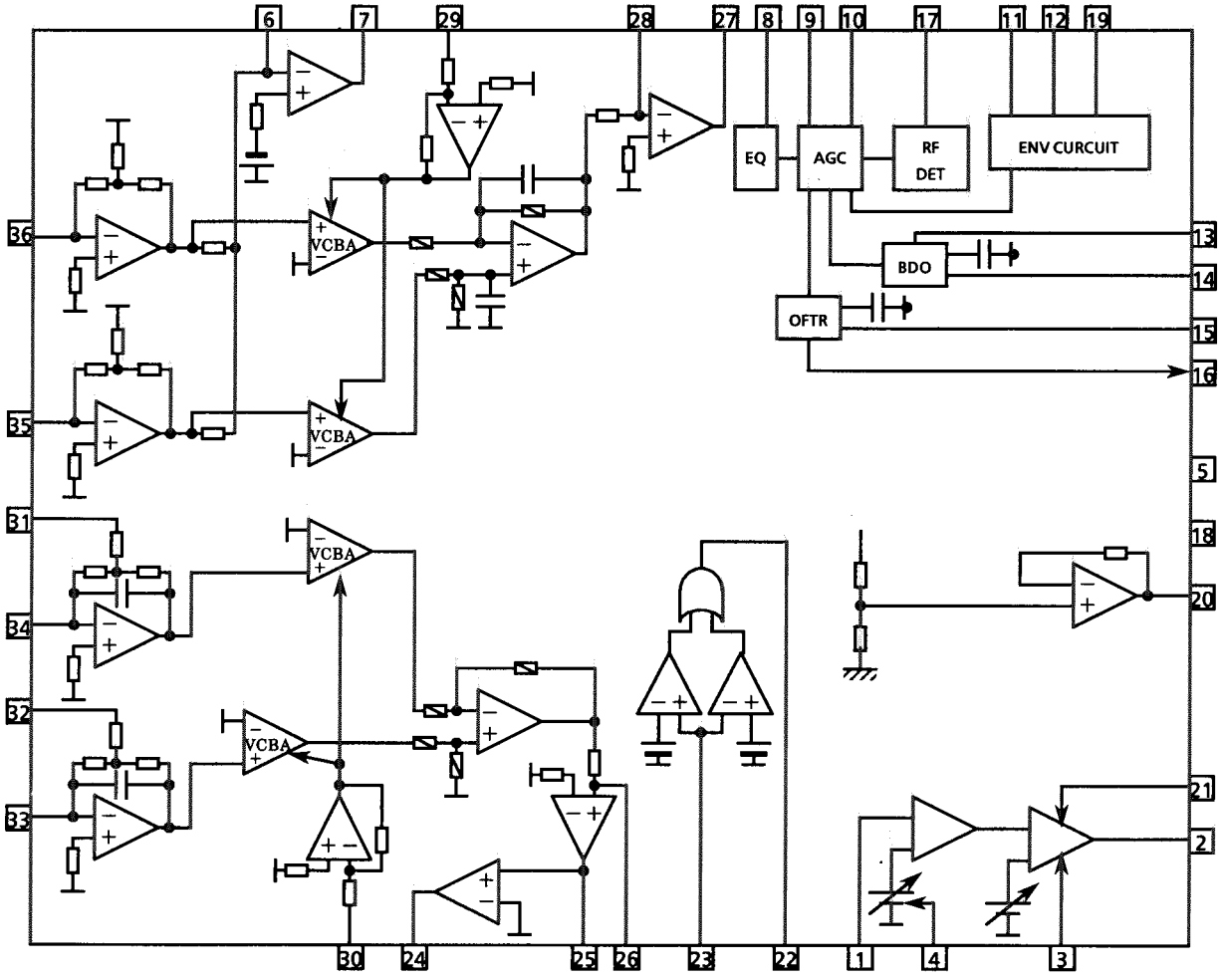
Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	BCLK	O	Bit clock output pin for SRDATA	41	TES	—	Not used
2	LRCK	O	L/R distinction signal output	42	PLAY	—	〃
3	SRDATA	O	Serial data output	43	WVEL	—	〃
4	DVDD1	—	Power supply(Digital)	44	ARF	I	RF signal input
5	DVSS1	—	Connected to GND(Digital)	45	IREF	I	Reference current input pin
6	TX	—	Not used	46	DRF	I	Bias pin for DSL
7	MCLK	I	µ-com command clock signal input (Data is latched at signal's rising point)	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	µ-com command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	µ-com command load signal input	49	VCOF	—	Not used
10	SENSE	O	Sense signal output (OFT,FESL,NACEND,NAJEND,POSAD,SFG)	50	AVDD2	—	Power supply (Analog)
11	/FLOCK	O	Lock signal for Focus L : pull	51	AVSS2	—	Connected to GND(Analog)
12	/TLOCK	O	Lock signal for Tracking L : pull	52	EFM	—	Not used
13	BLKCK	O	Subcode · block · clock signal output	53	PCK	—	〃
14	SQCK	I	Outside lock for sub-code Q resister input	54	PDO	—	〃
15	SUBQ	O	Sub-code Q-code output	55	SUBC	O	Subcode serial output data output
16	DMUTE	I	Muting input (H : MUTE)	56	SBCK	—	Clock input for subcode serial output
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	—	Connected to GND(for X'tal cscillation circuit)
18	/RST	I	Reset signal input (L :Reset)	58	X1	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	—	Not used	59	X2	—	Not used
20	PMCK	—	Not used	60	VDD	—	Power supply(for X'tal cscillation circuit)
21	TRV	O	Traverse enforced output	61	BYTCK	—	Not used
22	TVD	O	Traverse drive output	62	/CLDCK	O	Subcode · Frame · Clock signal output
23	PC	—	Not used	63	FCLK	O	X'tal frame clock output
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	IPPLAG	O	Interpolation flag output H : Interpolation
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	FLAG	—	Flag output
26	KICK	O	Kick pulse output	66	CLVS	—	Not used
27	TRD	O	Tracking drive output	67	CRC	—	〃
28	FOD	O	Focus drive output	68	DEMPH	O	De-emphasis ON signal (H : ON)
29	VREF	I	Reference voltage input pin for D/A output block(TVD,FOD,FBAL,TBAL)	69	RESY	—	Not used
30	FBAL	O	Focus Balance adjust signal output	70	NC1	—	〃
31	TBAL	O	Tracking Balance adjust signal output	71	/TEST	—	Pull up (+5V)
32	FE	I	Focus error signal input(Analog input)	72	AVDD1	—	Power supply (Digital)
33	TE	I	Tracking error signal input(Analog input)	73	NC2	—	Not used
34	RF ENV	I	RF envelope signal input(Analog input)	74	AVSS1	—	Connected to GND
35	VDET	I	Vibration detect signal input(H : detect)	75	NC3	—	Not used
36	OFT	I	Off track signal input(H : off track)	76	RSEL	—	Pull up (+5V)
37	TRCRS	I	Track cross signal input	77	CSEL	—	Connected to GND
38	/RFDET	I	RF detect signal input (L : detect)	78	PSEL	—	Connected to GND
39	BDO	I	BDO input pin (H : drop out)	79	MSEL	—	Connected to GND
40	LDON	O	Laser ON signal output (H : on)	80	SSEL	—	Pull up (+5V)

■ AN8806SB (IC501) : RF & SERVO AMP

1. Terminal Layout



2. Block Diagram

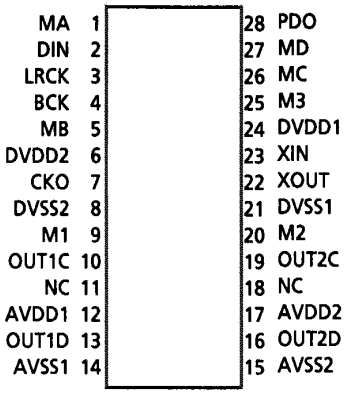


3. Description

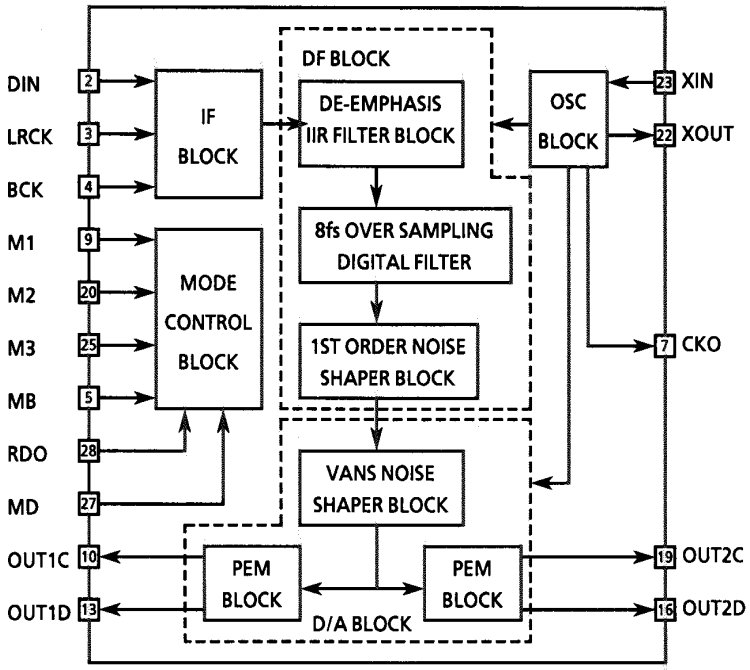
Pin No.	Symbol	I/O	Description
1	PD	I	APC amp input terminal
2	LD	O	APC amp output terminal
3	LD ON	I	APC ON/OFF control terminal
4	LDP	--	Connected to GND
5	VCC	--	Power supply
6	RF-	I	Inverse input pin for RF amp
7	RF OUT	O	RF amp output pin
8	RF IN	I	RF input pin
9	C.AGC	I/O	Connecting pin of AGC loop filter
10	ARF	O	RF output pin
11	C.ENV	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
12	C.EA	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
13	CS BDO	I/O	A capacitor is connected to detect the lower envelope of the RF signal
14	BDO	O	BDO output pin
15	CS BRT	I/O	A capacitor is connected to detect the lower envelope of the RF signal
16	OFTR	O	Of-track status signal output pin
17	/NRFDET	O	RF detection signal output pin
18	GND	--	GND
19	ENV	O	Envelope output
20	VREF	O	Reference voltage output pin
21	LD OFF	--	Connect to GND
22	VDET	O	Vibration detection signal output pin
23	TE BPF	I	Input pin of tracking error through BPF
24	CROSS	O	Tracking error cross output pin
25	TE OUT	O	Tracking error signal output pin
26	TE-	I	Inverse input pin for tracking error amp
27	FE OUT	O	Output pin of focus error
28	FE-	I	Inverse input pin for focus error amp
29	FBAL	I	Focus balance control pin
30	TBAL	I	Tracking balance control pin
31	PDFR	I/O	F I-V amp gain control pin
32	PDER	I/O	E I-V amp gain control pin
33	PDF	I	I-V amp input pin
34	PDE	I	I-V amp input pin
35	PD BD	I	I-V amp input pin
36	PD AC	I	I-V amp input pin

■ MN35503 (IC301) : D / A CONVERTER

1. Terminal Layout



2. Block Diagram

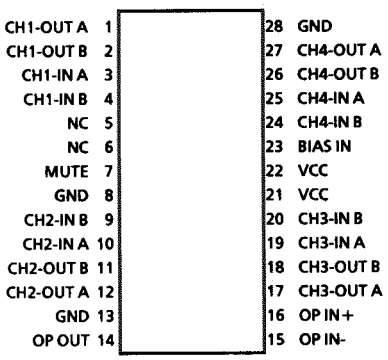


3.Description

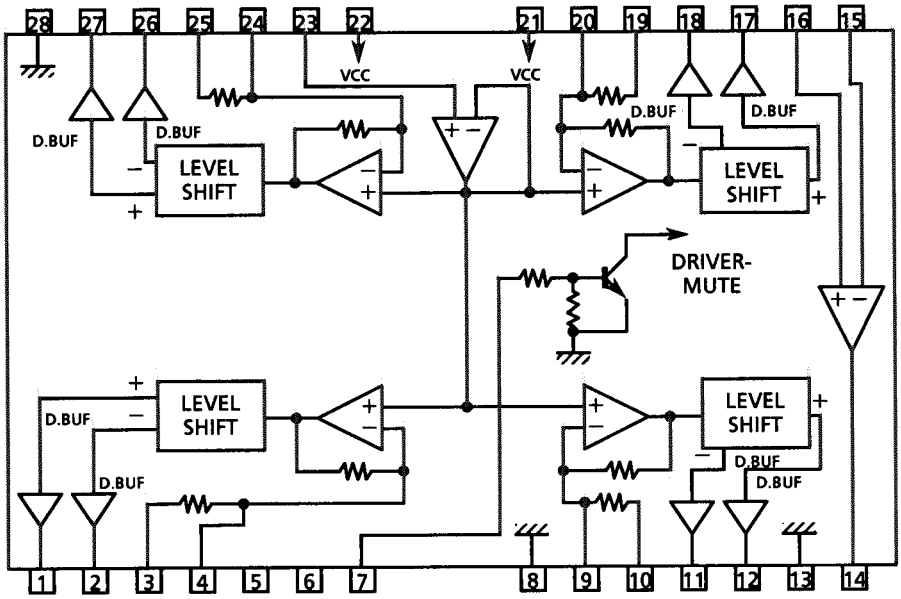
Pin No	Symbol	I/O	Description	Pin No	Symbol	I/O	Description
1	MA	--	Connected to ground	15	AVSS2	--	Analog ground 2
2	DIN	I	Data input	16	OUT2D	O	2D PEM output
3	LRCK	I	LR clock input	17	AVDD2	--	Analog power supply 2
4	BCK	I	Bit clock input	18	NC	--	Non connection
5	MB	I	De-emphasis ON signal	19	OUT2C	O	2C PEM output
6	DVDD2	--	Digital power supply 2	20	M2	--	Connected to ground
7	CKO	I	Clock output	21	DVSS1	--	Digital ground pin 1
8	DVSS2	--	Digital ground 2	22	XOUT	O	Crystal oscillator output
9	M1	--	Connected to ground	23	XIN	I	Crystal oscillator input
10	OUT1C	O	1C PEM output	24	DVDD1	--	Digital power supply 1
11	NC	--	Non connection	25	M3	--	Connected to ground
12	AVDD1	--	Analog power supply 1	26	MC	--	Connected to ground
13	OUT1D	O	1D PEM output	27	MD	I	Reset signal / Digital Att. control signal input
14	AVSS1	--	Analog ground 1	28	PDO	--	Not used

■ BA6897FP(IC801) : BTL DRIVER

1. Terminal Layout



2. Block Diagram

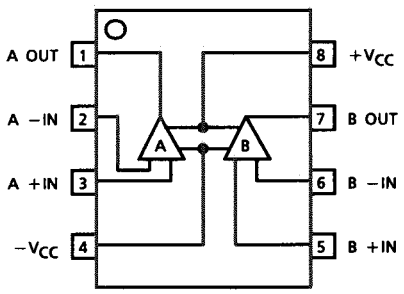


3.Description

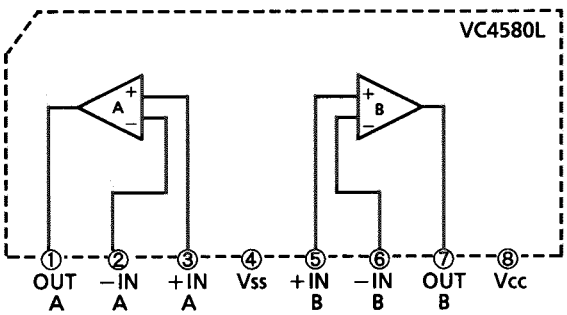
Pin No.	Symbol	I/O	Description
1 2	CH1-OUT A CH1-OUT B	O	Focus drive output
3	CH1-IN A	I	Focus drive input
4 5,6 10 19 24	CH1-IN B NC CH2-IN A CH3-IN A CH4-IN B	—	Non connection
7	MUTE	I	Mute signal input pin
9 20	CH2-IN B CH3-IN B	I I	Spindle motor drive input Feed motor drive input
25	CH4-IN A	I	Tracking drive input

Pin No.	Symbol	I/O	Description
8,13,28	GND	—	GND
11 12	CH2-OUT B CH2-OUT A	O	Spindle motor drive output
14	OP OUT	O	OP amp output
15,16	OP IN	I	OP amp input
17 18	CH3-OUT A CH3-OUT B	O	Feed motor drive output
21,22	Vcc	—	Power supply
23	BIAS IN	I	Input pin of Bias
26 27	CH4-OUT B CH4-OUT A	O	Tracking drive output

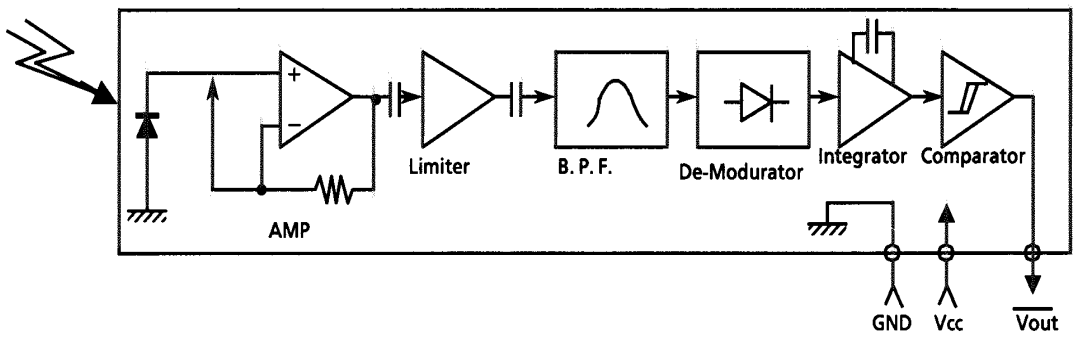
■VC4580D(IC251,IC304)
Dual OP Amp.



■ VC4580L (IC601) : Dual OP Amp.

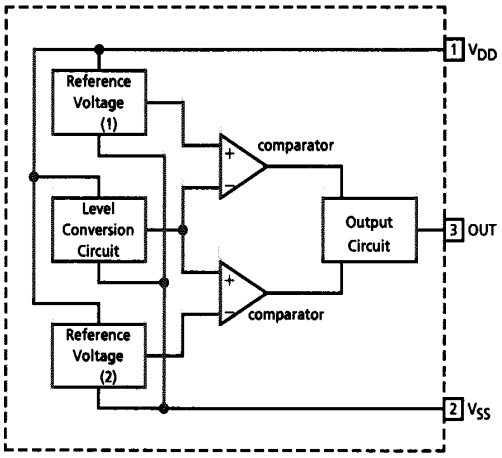


■SPS-420-1 (IC701) : Remocon Module IC (Not use for XL-F152BK)



■ PST9140T : IC202 :Reset IC)

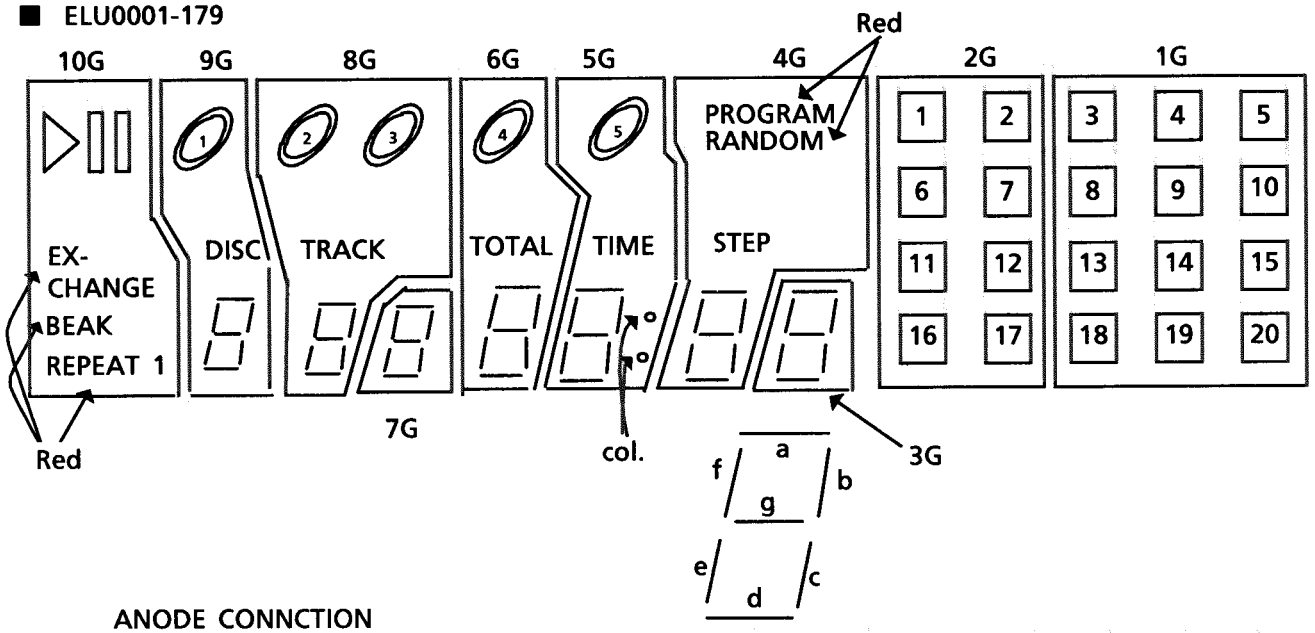
Block Diagram



Pin No.	Pin Name	Functions
1	V_{DD}	Power supply
2	V_{SS}	Ground
3	OUT	Reset signal output : Low level is output when resetting : High level is output when cancelling the reset.

Internal Connections for FL Display Tube

■ ELU0001-179



ANODE CONNCTION

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	▶	1	2	--	4	5	PROGRAM	--	1	3
P2	▮▮	(1)	(2)	--	(4)	(5)	RANDOM	--	2	4
P3	--	--	3	--	--	--	--	--	--	5
P4	EX-CHANGE	DISC	(3)	--	TOTAL	TIME	STEP	--	6	8
P5	--	--	TRACK	--	--	col.	--	--	7	9
P6	--	a	a	a	a	a	a	a	--	10
P7	BREAK	b	b	b	b	b	b	b	11	13
P8	--	f	f	f	f	f	f	f	12	14
P9	--	g	g	g	g	g	g	g	--	15
P10	--	c	c	c	c	c	c	c	16	18
P11	REPEAT	e	e	e	e	e	e	e	17	19
P12	1	d	d	d	d	d	d	d	--	20

TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14~20	
ELECTORODE	F1	F1	NP	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	NC	
TERMINAL NO	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
ELECTORODE	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	NP	F1	F1

(Notes) F:Filament G:Grid NP:No Pin P:Anode NC:No Connction

Disassembiy Procedyres

■ Top cover removal
1. Remove 4 scerws on both sides of the top cover and 2 scerws on the rear side.
2. Lift the back of the top cover spreding both sides to remove.

■ Front panel assembly removal
1. Remove the top cover.
2. Disconnect the wires CN106 and P271(Fig 2).
3. Remove 7 screws Ⓐ,Ⓓ,Ⓔ and Ⓕ(Fig.1,2,3).
4. Remove the front panel assembly.

■ Bottom cover removal
1. Remove the top cover.
2. Remove 14 screws Ⓐ,Ⓑ,Ⓒ and Ⓕ(Fig. 1,2,3).
3. Remove the bottom cover.

■ Rear panel removal
1. Remove the top cover.
2. Remove 8 screws Ⓒ,Ⓖ and Ⓗ(Fig. 1,4).
3. Remove the rear panel.

■ Disc tray removal
1. Remove the top cover.
2. Remove the front panel assembly.
3. Turn the power on press the open/close button to move the table out.
   Then turn the power off.
   If the machine doesn't work, move the table out at procedure 4.
(4. Move a boss on the cam which is under Ⓙhole clockwise by a screwdriver to remove the disc tray manually, and move the disc tray forwrad. (Fig. 1.)
   And CD mechanism assembly goes down.)
5. Remove the screw Ⓘ(Fig. 2).
6. Disconnect CN105(Fig. 2).
7. Slide the disc tray backward slightly.
   And, move the tray forward while lifting up Ⓚ to remove the disc tray from the stopper.(Fig. 2)
8. Remove the disc tray.

■ Disc table removal
1. Remove the top cover.
2. Remove the disc table.
3. Remove the screw Ⓛ(Fig. 6)
4. Remove the disc table.

■ Disc tray motor assembly removal
1. Remove the top cover.
2. Remove the disc tray.
3. Remove the bottom cover.
4. Remove the gear Ⓝ(Fig. 7).
5. Remove the loading belt Ⓞ(Fig. 7).
6. Remove the 2 screws, and remove the disc tray motor assembly(Fig. 8).

■ Audio out & compulink PCB removal
1. Remove the top cover.
2. Remove the disc table.
3. Remove the bottom cover.
4. Remove the rear panel.
5. Remove the hooks fixing the PCB(Fig. 8).

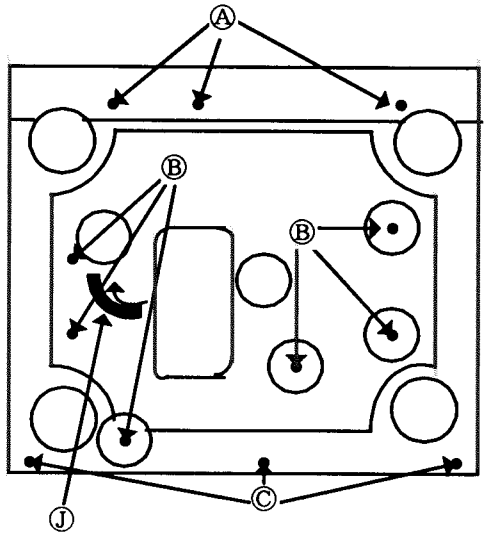


Fig 1 Bottom view

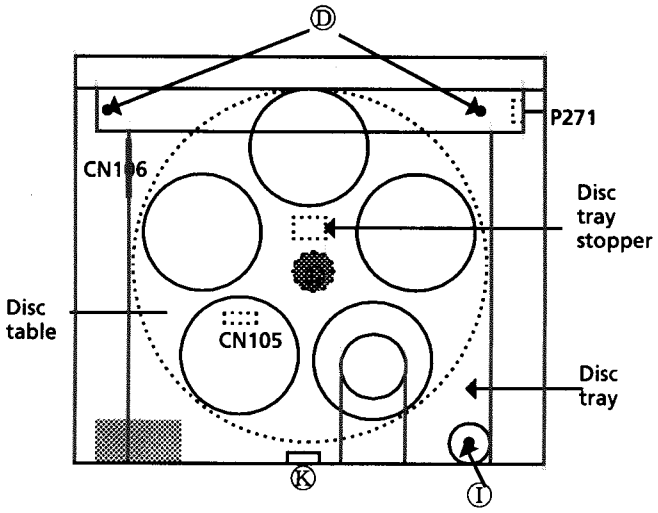


Fig 2 Top view(without the top cover)

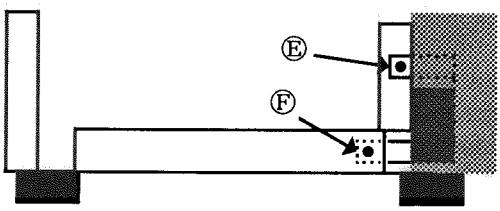


Fig 3 Side view(without the top cover)

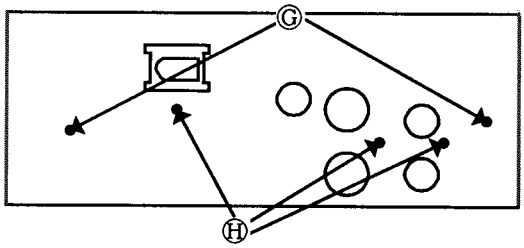


Fig 4 Rear view

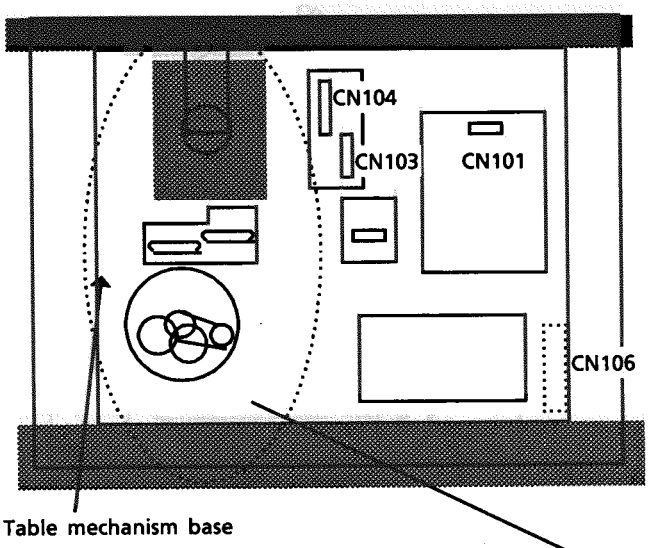


Fig 5 Top view
(Withput top cover
and disc tray)

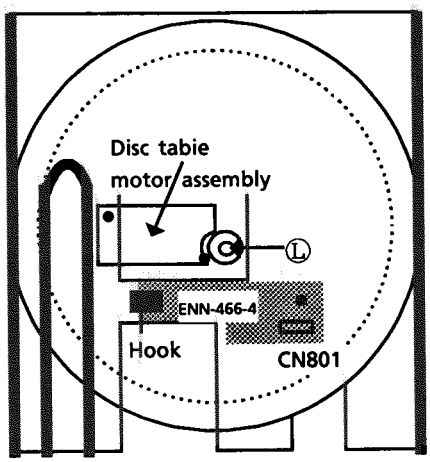


Fig 6 Disc tray bottom view

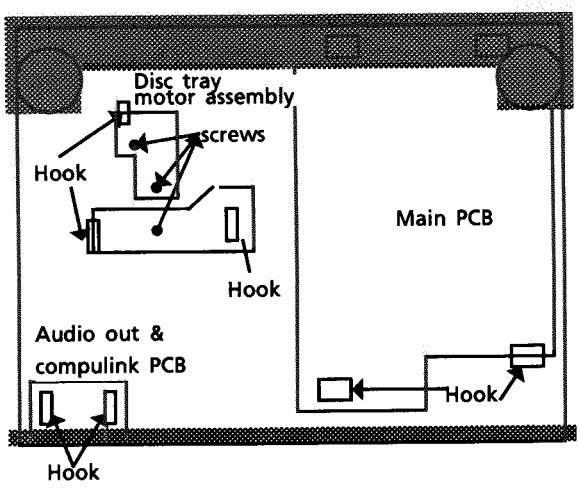


Fig 8 Bottom view
(Without the bottom cover)

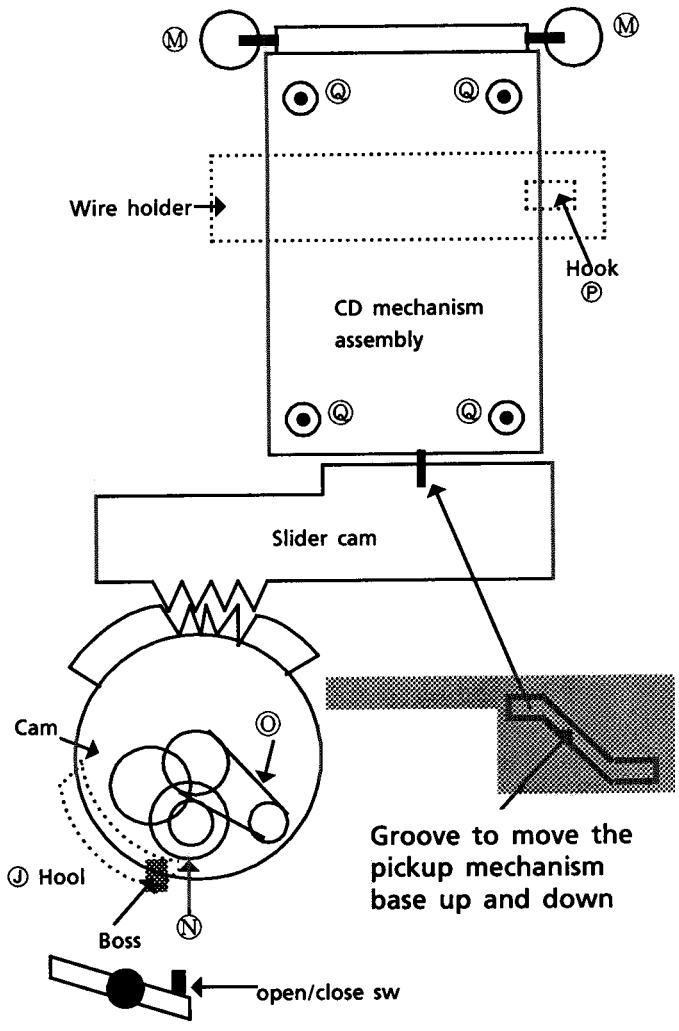


Fig 7 Loading mechanism

■ Main PCB removal

1. Remove the top cover.
2. Remove the disc tray.
3. Remove the bottom cover.
4. Disconnect the connectoing CN101,CN103,CN104 and P106(Fig. 5).
5. Remove the hooks fixing the main PCB(Fig. 8).
6. Remove the main PCB.

■ CD mechanism assembly removal

1. Remove the top cover.
2. Remove the disc table.
3. Remove the bottom cover.
4. Disconnect the connecting CN103 and CN104(Fig. 5)
5. Remove the hook Ⓟ fixing the table mechanism base, and remove the wire holder(Fig. 7).
6. Remove the 2 screws Ⓜ (Fig. 7).
7. Remove the 4 screws Ⓠ (Fig. 7).
8. Remove the CD mechanism assembly.

Disassemble of the CD mechanism assembly

■ Removing the Pickup

1. Remove the CD mech. assembly.
2. Release the shaft to remove the pickup.

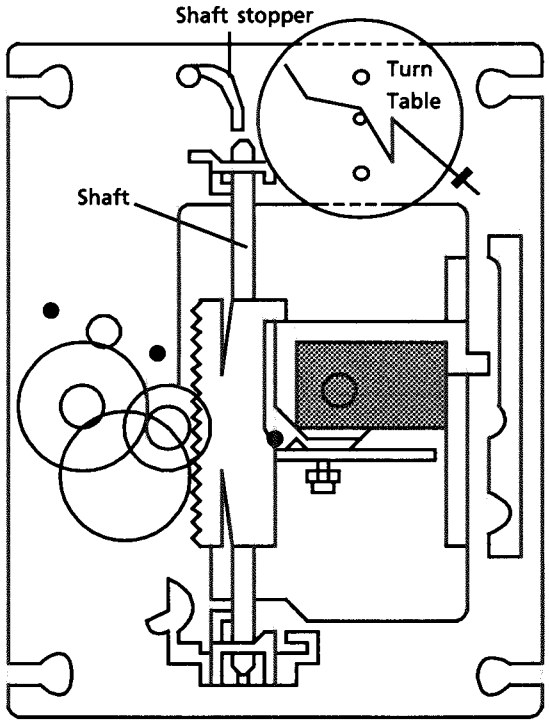


Fig 9

■ Spindle motor installation

1. Tighten the 2 screws to the same torque.
2. Fasten the spindle and feed motor P.C. board with the screw and solder.
3. Install the turntable.When installing, press straight down at the center of the turntable until the distance from the surface of the mech. base to the turntable is exactly 19.4±0.1mm.

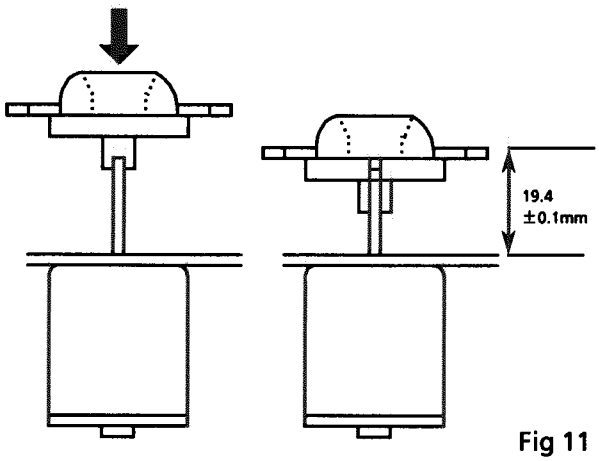


Fig 11

■ Removing the Spindle motor

1. Remove the CD mech. assembly.
2. Remove the turntable, and remove the 2 screws Ⓟ retaining the spindle motor.
3. Remove the screw retaining the spindle and feed motor circuit board and unsolder it.

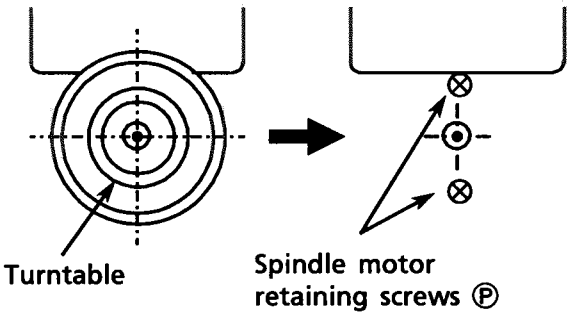


Fig 10

■ After inserting the turntable, bond the motor shaft and turntable together (at the section marked by an arrow in fig 12on the left below).

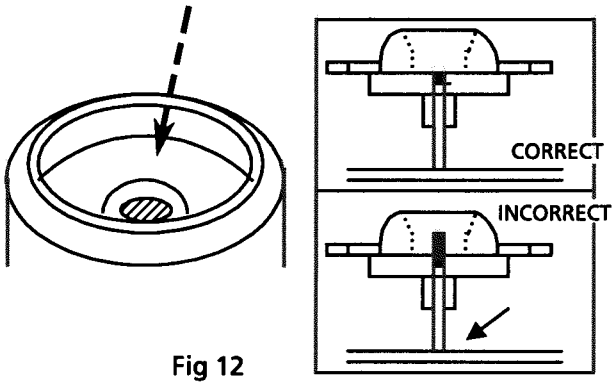


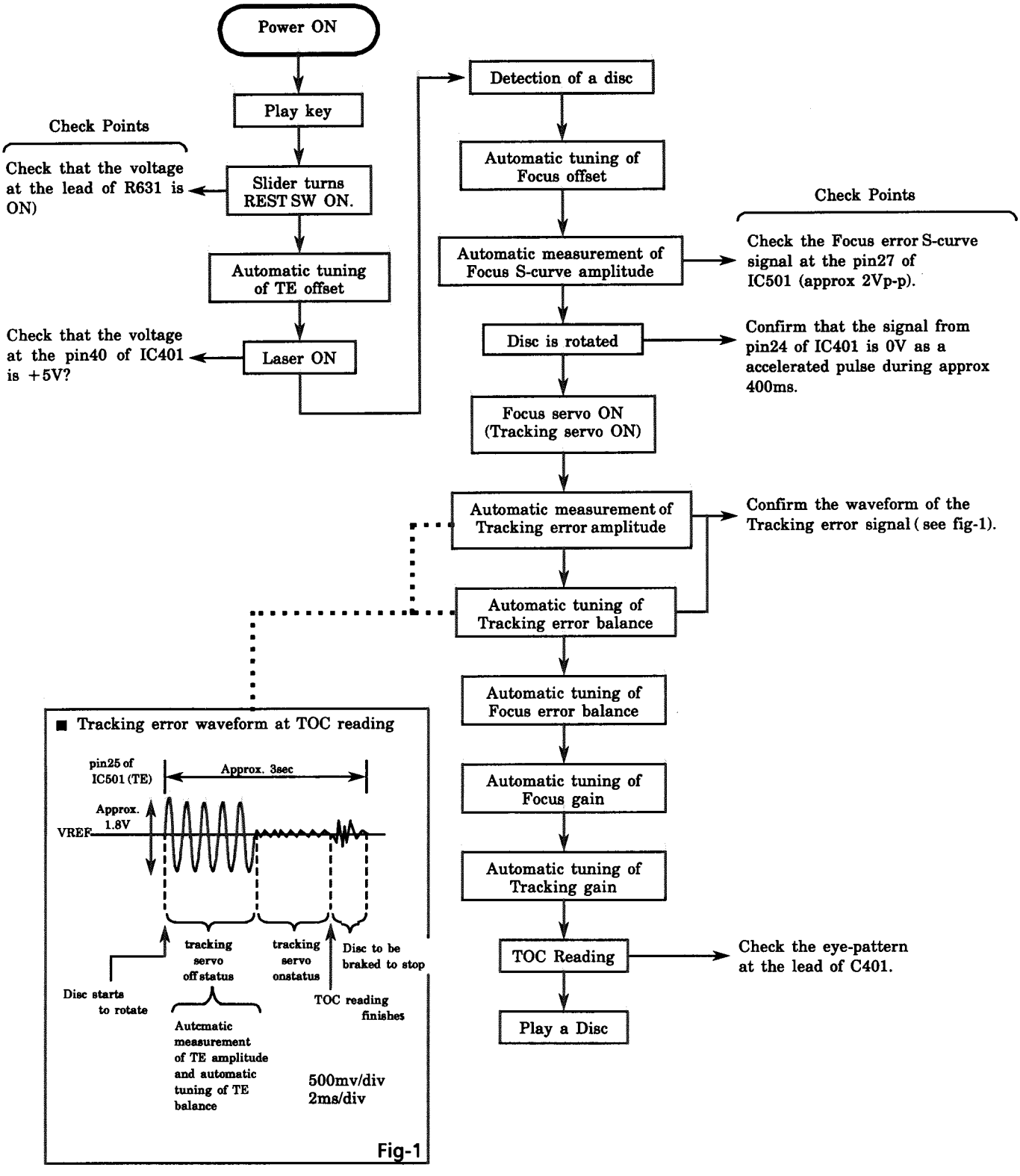
Fig 12

■ Use "LOCKTITE" #460 bonding agent, and apply as little as possible.

Take care not to allow any excess bonding agent to get onto the turntable.

Be extremely careful not to allow bonding agent to adhere to the motor bearing (the section marked by an allow in fig 12 on the right).

Flow of Functional Operation Until TOC is Read


Power ON
Play key
Check Points
Check that the voltage at the lead of R631 is ON)
Slider turns REST SW ON.
Automatic tuning of TE offset
Check that the voltage at the pin40 of IC401 is +5V?
Laser ON
Detection of a disc
Automatic tuning of Focus offset
Check Points
Automatic measurement of Focus S-curve amplitude
Check the Focus error S-curve signal at the pin27 of IC501 (approx 2Vp-p).
Disc is rotated
Confirm that the signal from pin24 of IC401 is 0V as a accelerated pulse during approx 400ms.
Focus servo ON (Tracking servo ON)
Automatic measurement of Tracking error amplitude
Confirm the waveform of the Tracking error signal (see fig-1).
Automatic tuning of Tracking error balance
Automatic tuning of Focus error balance
Automatic tuning of Focus gain
Automatic tuning of Tracking gain
TOC Reading
Check the eye-pattern at the lead of C401.
Play a Disc
■ Tracking error waveform at TOC reading
pin25 of IC501 (TE)
Approx. 3sec
Approx. 1.8V
VREF
tracking servo off status
tracking servo onstatus
Disc to be braked to stop
Disc starts to rotate
TOC reading finishes
Autcmatic measurement of TE amplitude and automatic tuning of TE balance
500mv/div
2ms/div
Fig-1

Maintenance of Laser Pickup

(1) Cleaning the pick up lens

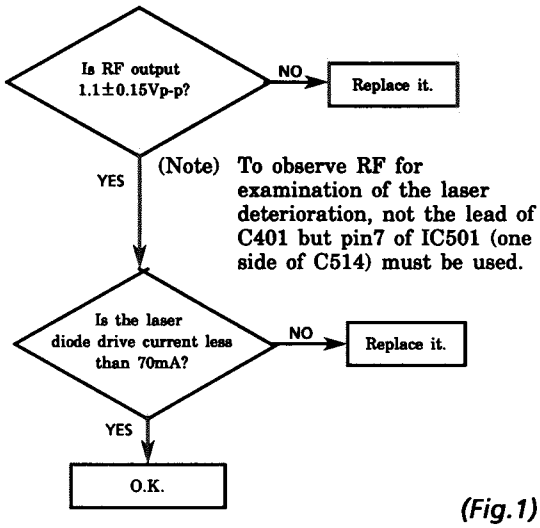
Befor you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

(2) Life of the laser diode (Fig.1)

When the life of the laser diode has expired, the following symptoms will appear.

(1) The level of RF output (EFM output: ampli tude of eye pattern) will be low.

(2) The drive current required by the laser diode will be increased. In such a case, check the life of the laser diode following the flowchart below.

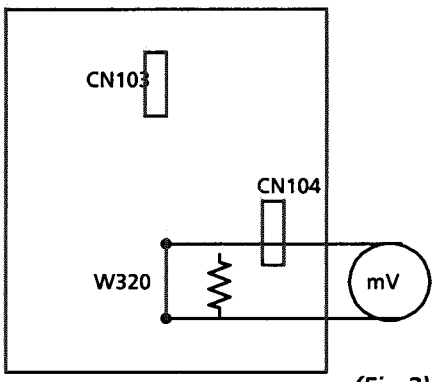

Is RF output 1.1±0.15Vp-p?
NO
Replace it.
YES
(Note) To observe RF for examination of the laser deterioration, not the lead of C401 but pin7 of IC501 (one side of C514) must be used.
Is the laser diode drive current less than 70mA?
NO
Replace it.
YES
O.K.

(Fig.1)

(3) Measurement of laser diode drive current (Fig.2)

Cut the jump wire (W320) and add a 1Ω resistor. (See the following Fig,2)

Measure the voltage across the resistor (1Ω) with a milli-voltmeter. When the voltage is more than 70mV, it shows that the life of the laser diode has expired.



ENN-466

(Fig.2)

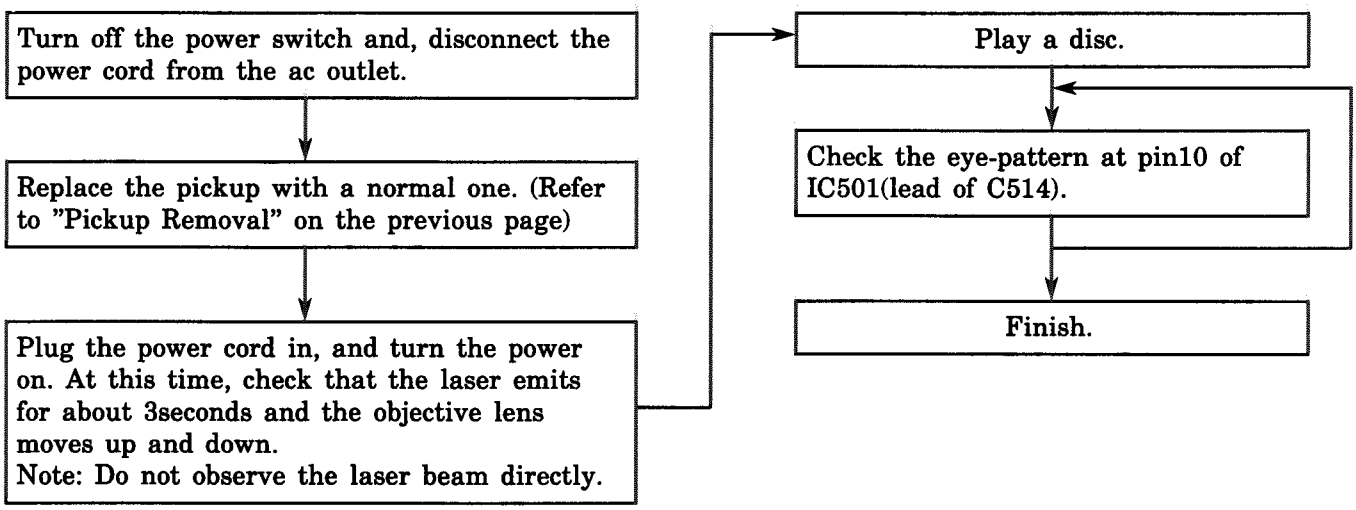
(4) Semi-fixed resistor on the APC PC board

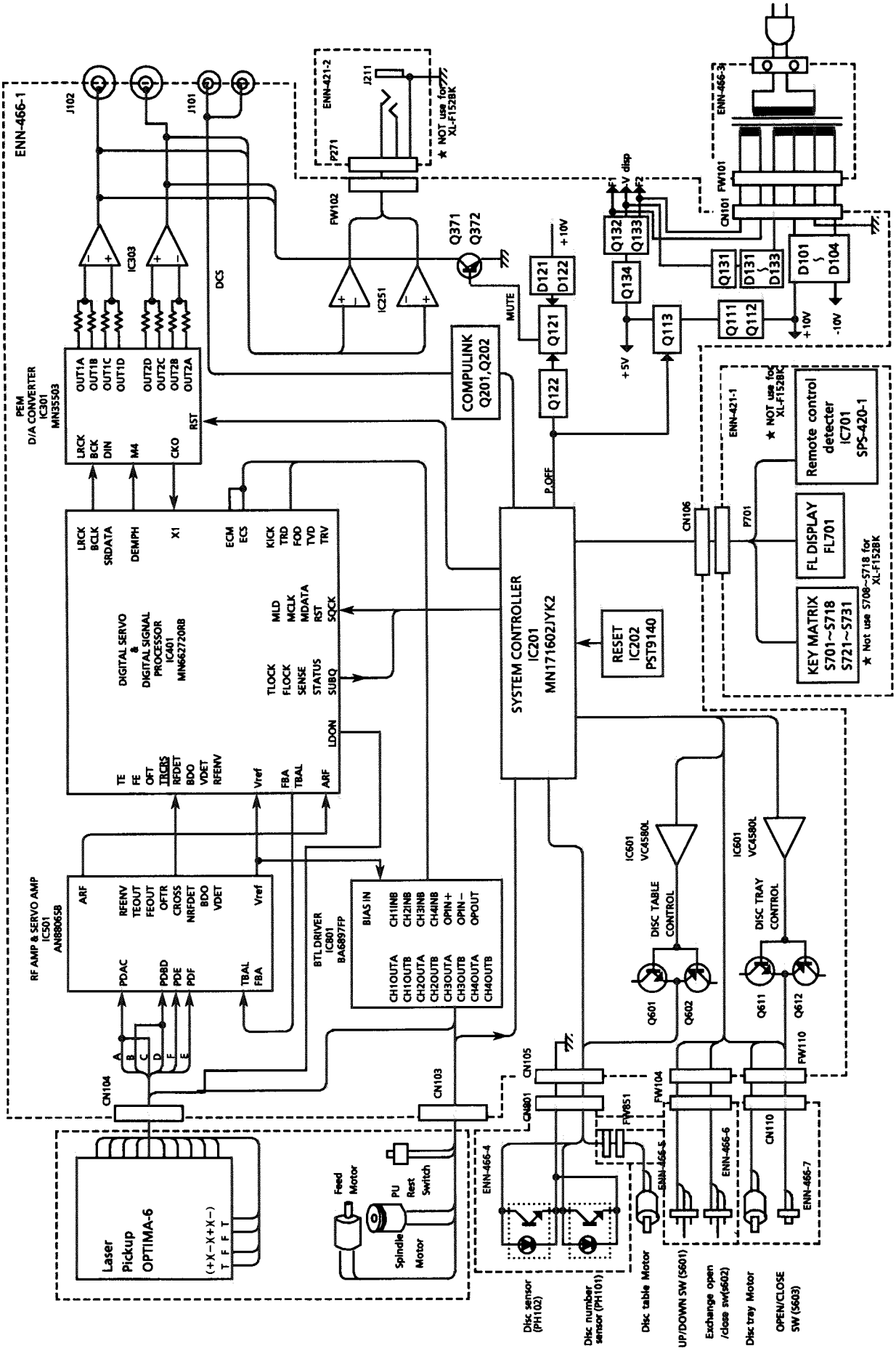
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.

If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.

If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

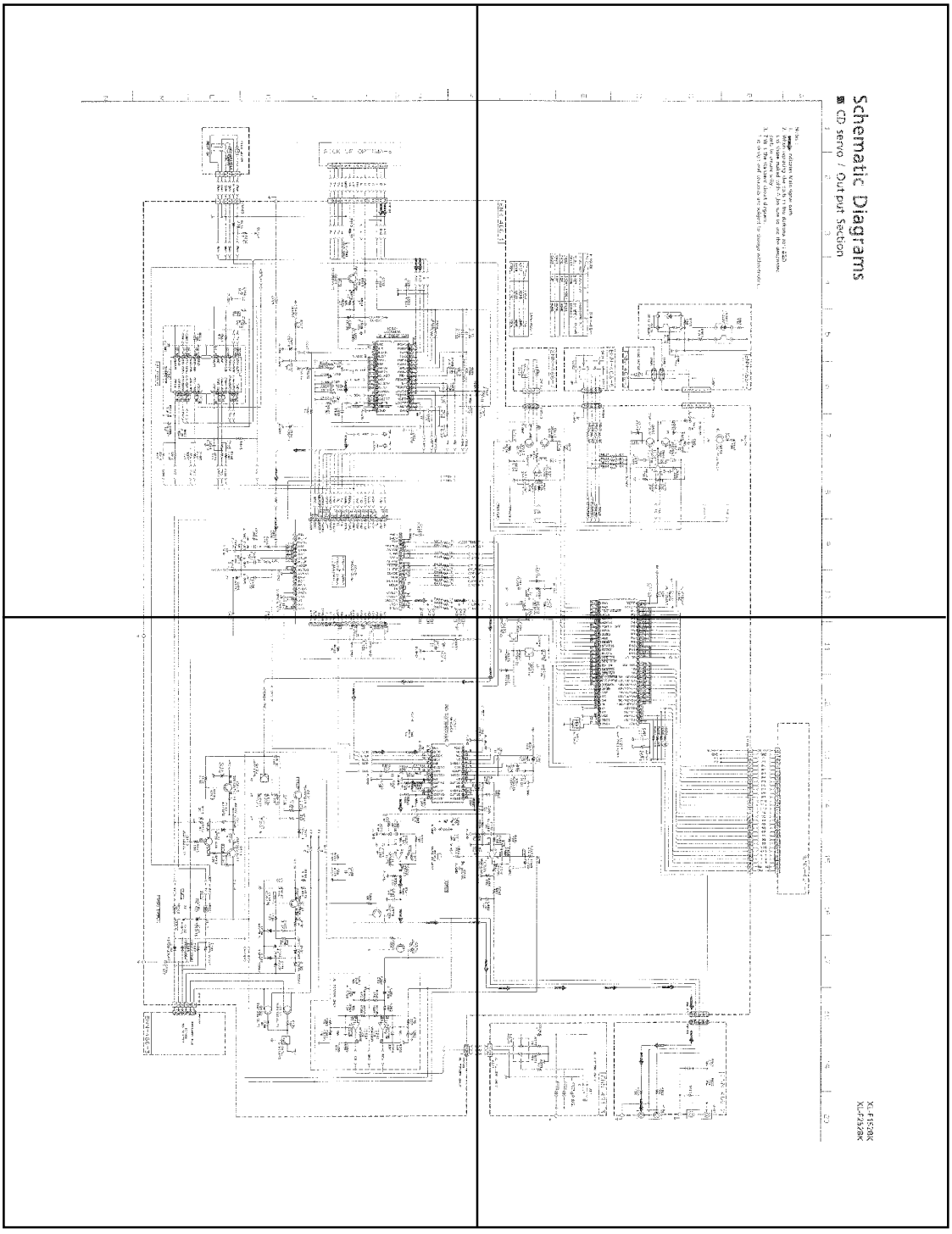
Replacement of Laser Pickup


Turn off the power switch and, disconnect the power cord from the ac outlet.
Replace the pickup with a normal one. (Refer to "Pickup Removal" on the previous page)
Plug the power cord in, and turn the power on. At this time, check that the laser emits for about 3seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc.
Check the eye-pattern at pin10 of IC501(lead of C514).
Finish.

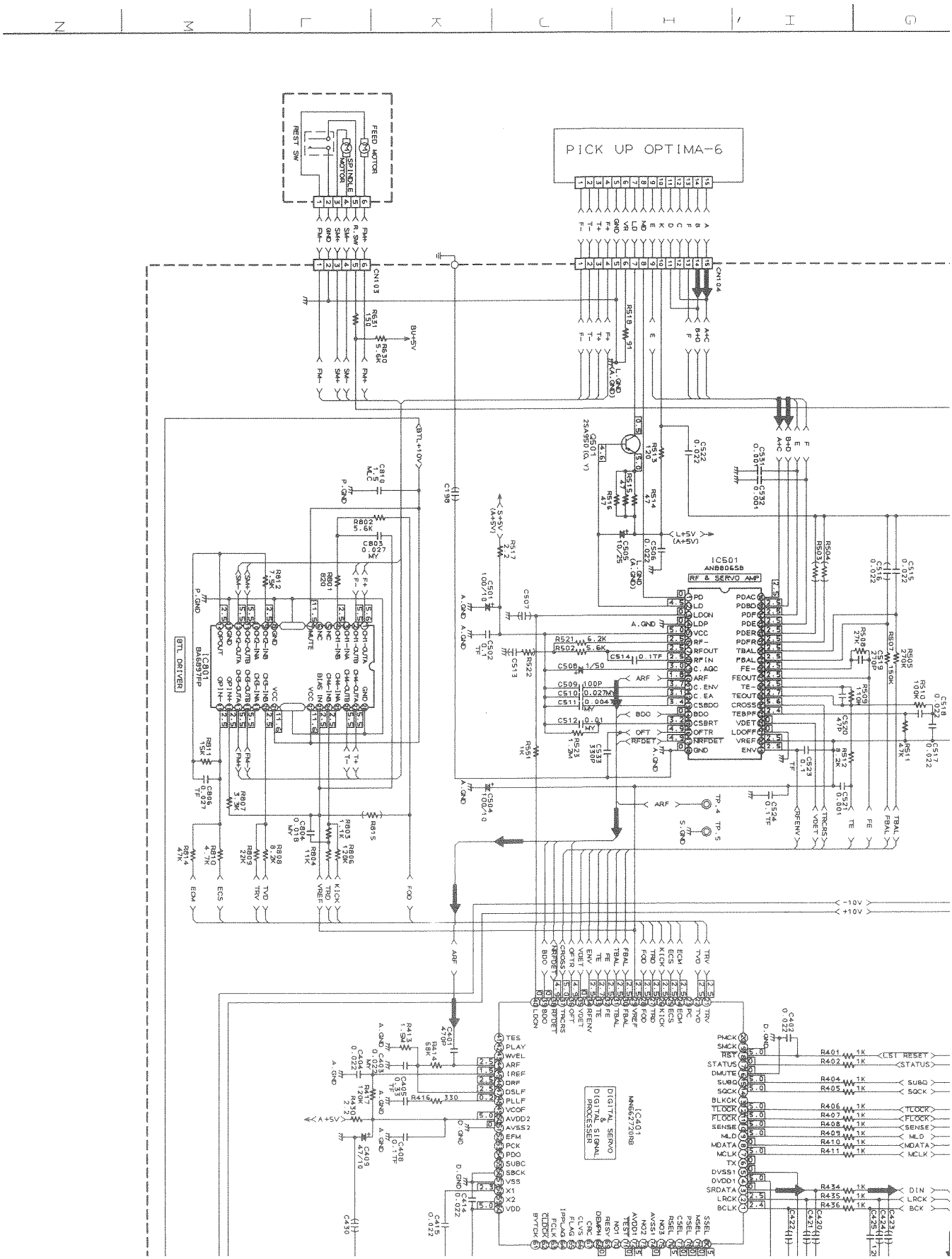

ENN-466-1
J102
J101
ENN-421-2
J211
P271
★ NOT use for XL-F152BK
FW102
ENN-466-3
CN101
FW101
F1
V disp
F2
IC303
IC251
DCS
Q371
Q372
D121
D122
+10V
Q132
Q133
Q131
D131 ~ D133
D101 ~ D104
Q134
Q113
Q111
Q112
+10V
-10V
+5V
MUTE
COMPULINK Q201,Q202
Q121
Q122
P.OFF
PEM D/A CONVERTER IC301 MN35503
OUT1A OUT1B OUT1C OUT1D OUT2D OUT2C OUT2B OUT2A
LRCK BCK DIN M4 CKO RST
DIGITAL SERVO & DIGITAL SIGNAL PROCESSOR IC401 MN662720RB
LRCK BCLK SRDATA DEMPH X1 ECM ECS KICK TRD FOD TVD TRV
TLOCK FLOCK SENSE STATUS SUBQ MLD MCLK MDATA RST SQCK LDON
TE FE OFT TRCRS RFDET BDO VDET RFENV Vref FBA TBAL ARF
SYSTEM CONTROLLER IC201 MN171602JYK2
RESET IC202 PST9140
CN106
P701
ENN-421-1
★ NOT use for XL-F152BK
Remote control detecter IC701 SPS-420-1
FL DISPLAY FL701
KEY MATRIX S701~S718 S721~S731
★ Not use S708~S718 for XL-F152BK
RF AMP & SERVO AMP IC501 AN8806SB
ARF RFENV TEOUT FEOUT OPTR CROSS NRFDET BDO VDET Vref
PDAC PDBD PDE PDF TBAL FBA
A B C D F E
BTL DRIVER IC801 BA6897FP
BIAS IN CH1INB CH2INB CH3INB CH4INB OPIN+ OPIN− OPOUT
CH1OUTA CH1OUTB CH2OUTA CH2OUTB CH3OUTA CH3OUTB CH4OUTA CH4OUTB
IC601 VC4580L
IC601 VC4580L
DISC TABLE CONTROL
DISC TRAY CONTROL
Q601
Q602
Q611
Q612
CN104
CN103
CN105
CN801
FW851
FW104
FW110
CN110
Laser Pickup OPTIMA-6
(+X−X+X−) T F F T
Feed Motor
PU Rest Switch
Spindle Motor
ENN-466-4
ENN-466-5
ENN-466-6
ENN-466-7
Disc sensor (PH102)
Disc number sensor (PH101)
Disc table Motor
UP/DOWN SW (S601)
Exchange open /close sw(S602)
Disc tray Motor
OPEN/CLOSE SW (S603)

MEMO

P-S.D-a P-S.D-b



P-S.D-c P-S.D-d


PICK UP OPTIMA-6
FEED MOTOR
REST SW
SPINDLE MOTOR
CN103
CN104
IC501
AN8806SB
RF & SERVO AMP
IC801
BA6897FP
BTL DRIVER
IC401
MN662720RB
DIGITAL SERVO
DIGITAL SIGNAL PROCESSER
Q501
2SA950 (O, Y)
BU+5V
BTL+10V
L+5V (A+5V)
S+5V (A+5V)
A+5V
-10V
+10V
A.GND
P.GND
D.GND
S.GND
ARF
BDO
LDON
RFDET
CROSS
OFTR
VDET
RFENV
TE
FBAL
TBAL
FE
FOD
TRD
KICK
ECS
ECM
TRV
TVD
VREF
TRCRS
DIN
LRCK
BCK
MDATA
MCLK
SQCK
SUBQ
SENSE
FLOCK
TLOCK
LST RESET
STATUS

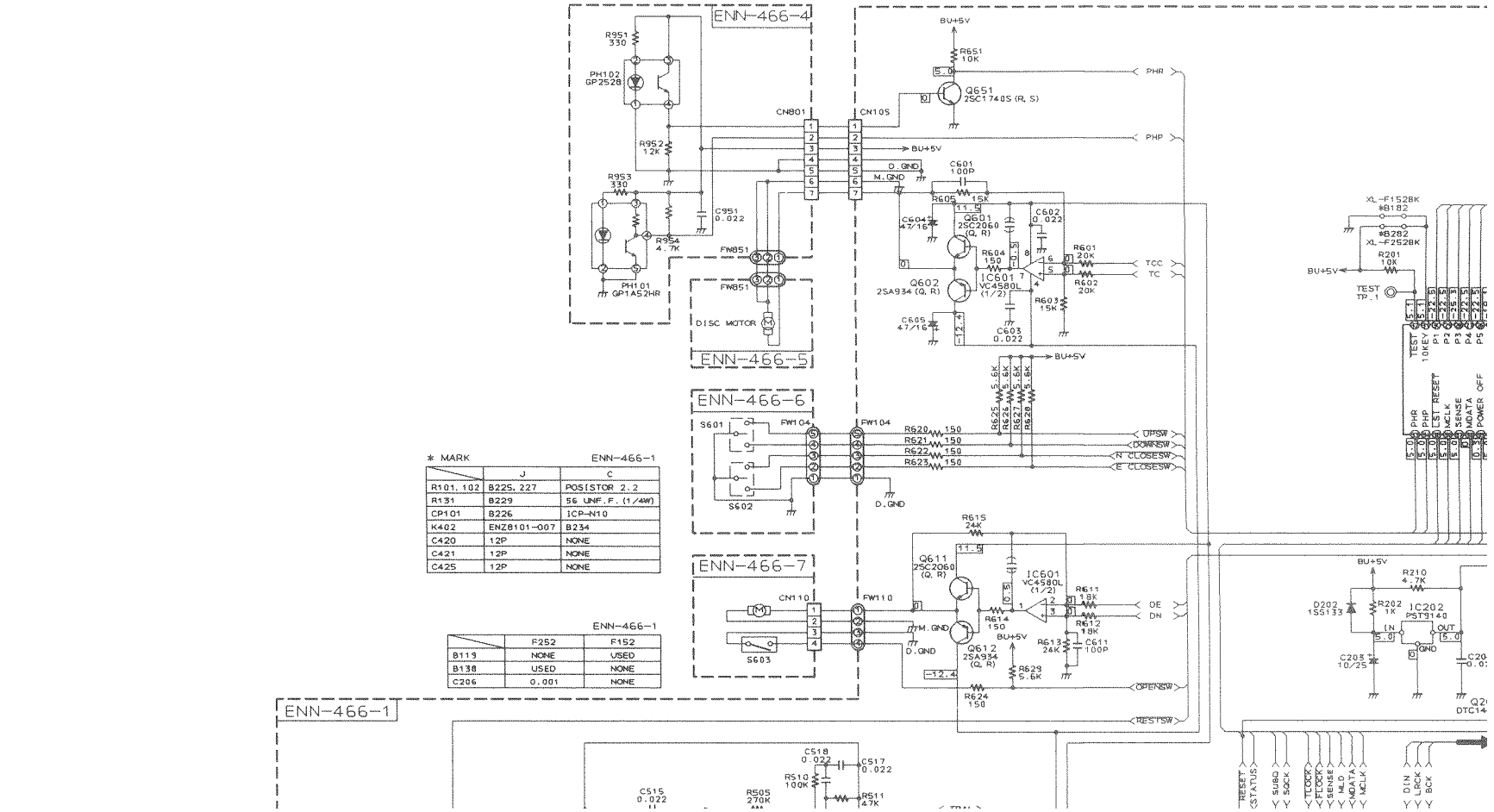
P-S.D-a

Schematic Diagrams

■ CD servo / Out put Section

Notes :

1. ➡ indicates Main signal path .
2. When replacing the parts in the darkend aer (▨) and those maked with ⚠ ,be sure to use the designated parts to ensure safty .
3. This is the standerd circuit diagram . The design and contents are subject to change withoutnotice .

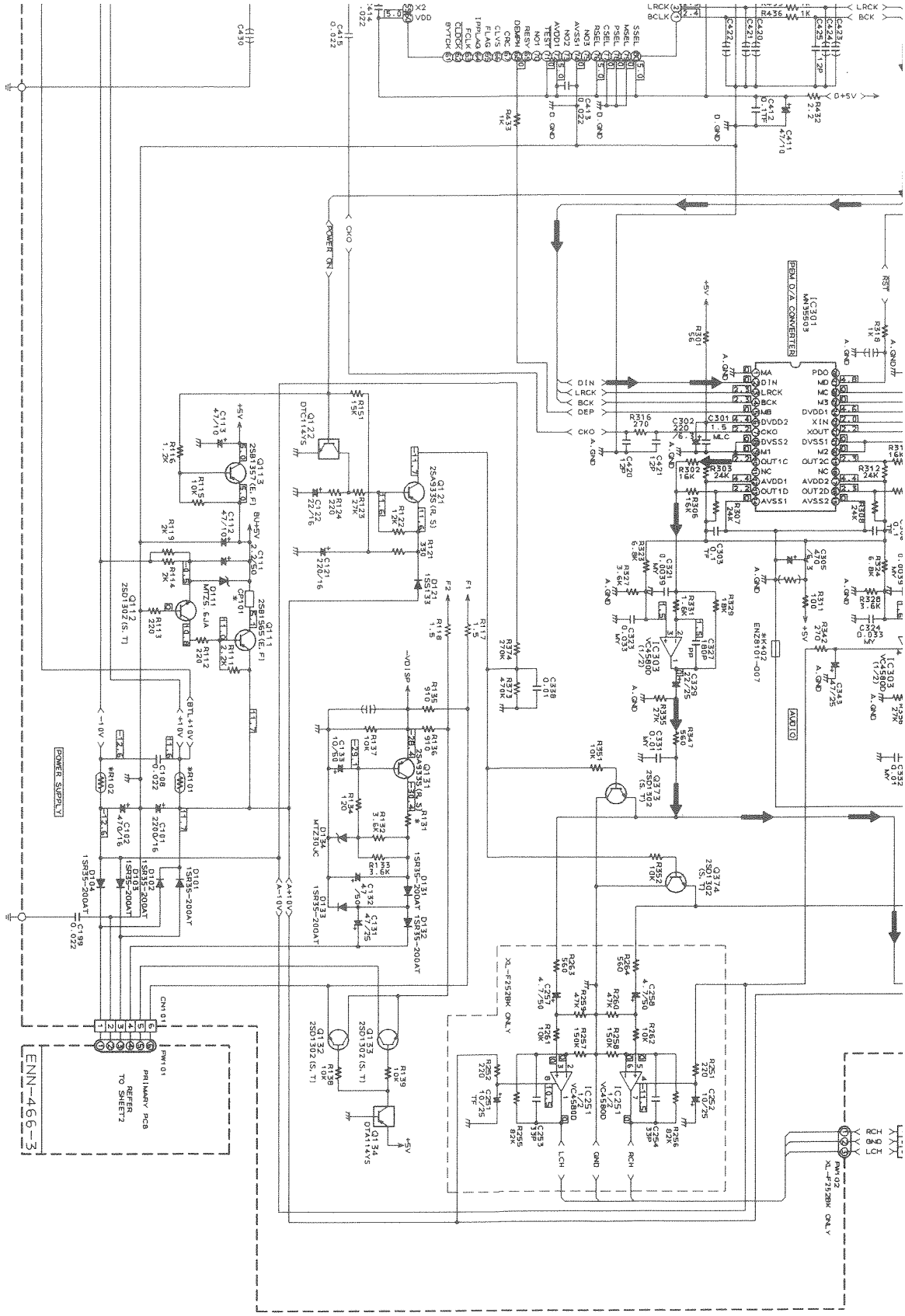


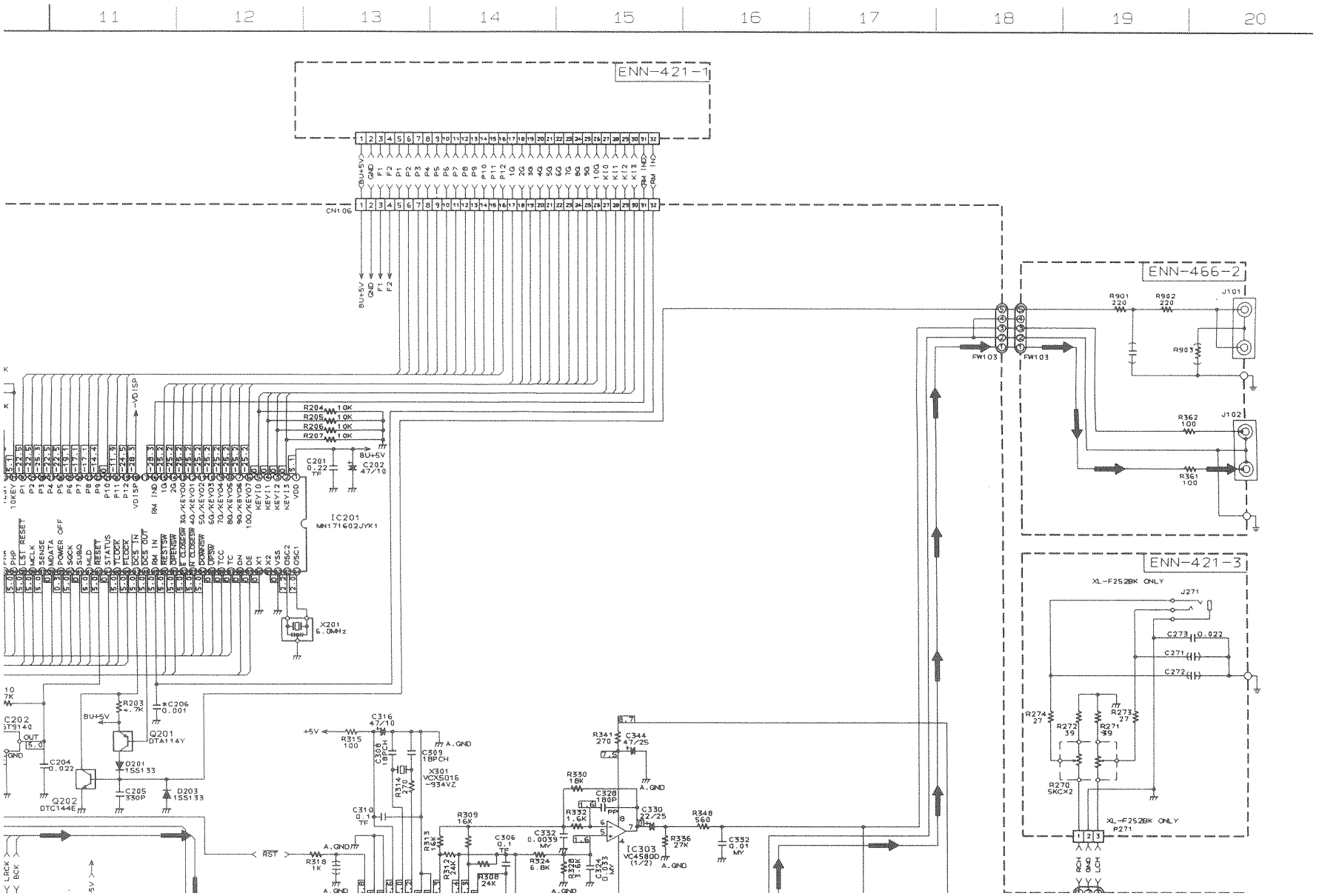
* MARK — ENN-466-1

	J	C
R101, 102	B225, 227	POSISTOR 2.2
R131	B229	56 UNF.F. (1/4W)
CP101	B226	ICP-N10
K402	ENZ8101-007	B234
C420	12P	NONE
C421	12P	NONE
C425	12P	NONE

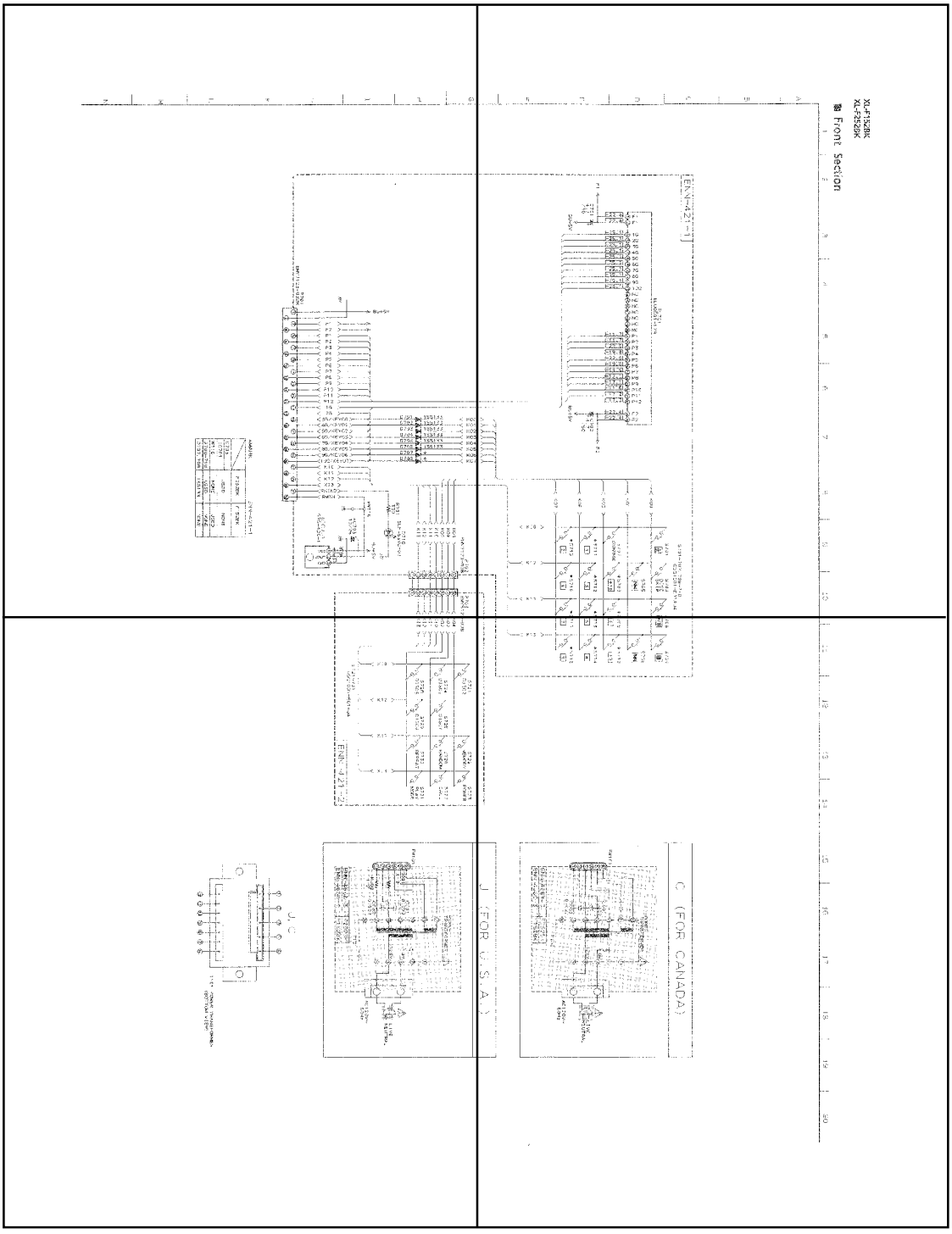
ENN-466-1

	F252	F152
B119	NONE	USED
B138	USED	NONE
C206	0.001	NONE

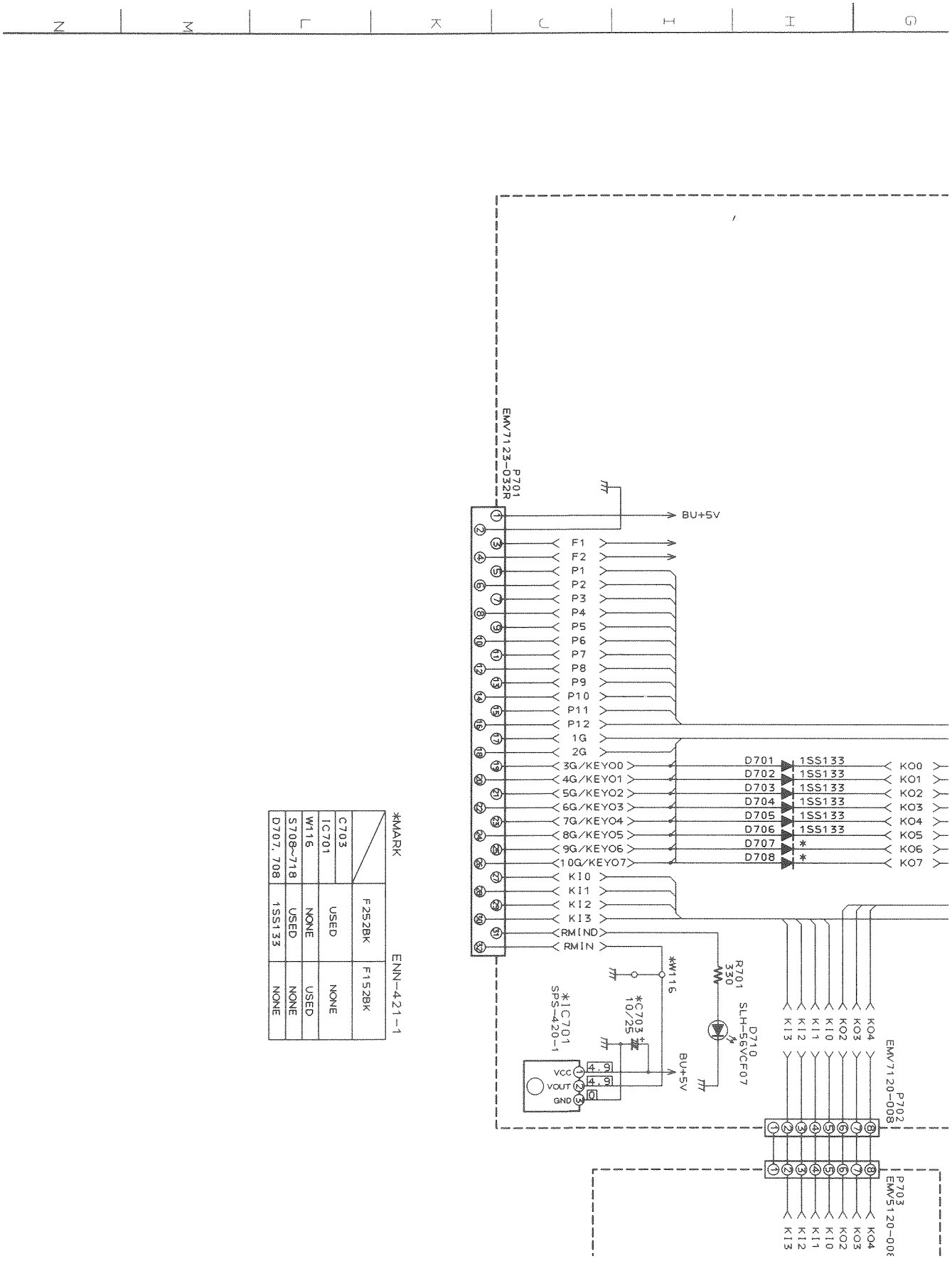



11
12
13
14
15
16
17
18
19
20
ENN-421-1
CN106
ENN-466-2
FW103
J101
J102
R901 220
R902 220
R903
R362 100
R361 100
ENN-421-3
XL-F252BK ONLY
J271
C273 0.022
C271
C272
R274 27
R272 39
R271 39
R273 27
R270 5KCX2
P271
IC201
MN171602JYK1
X201 6.0MHz
R204 10K
R205 10K
R206 10K
R207 10K
C201 0.22
C202 47/10
R203 4.7K
C206 0.001
Q201 DTA114Y
D201 1SS133
D203 1SS133
C204 0.022
C205 330P
Q202 DTC144E
C316 47/10
C308 18PCH
C309 18PCH
X301 VCX5016 -954VZ
C310 0.1
R314 270
R315 100
R309 16K
R313 24K
R312 24K
R318 1K
C306 0.1
R308 24K
R324 6.8K
C332 0.0039
R332 1.6K
R328 9.1K
C324 0.033
IC303 VC4580D (1/2)
R330 18K
C328 180P
C330 22/25
R336 27K
R348 560
C332 0.01
R341 270
C344 47/25
A.GND
BU+5V
+5V
RST
LRCK
BCK

P-F.S-a P-F.S-b



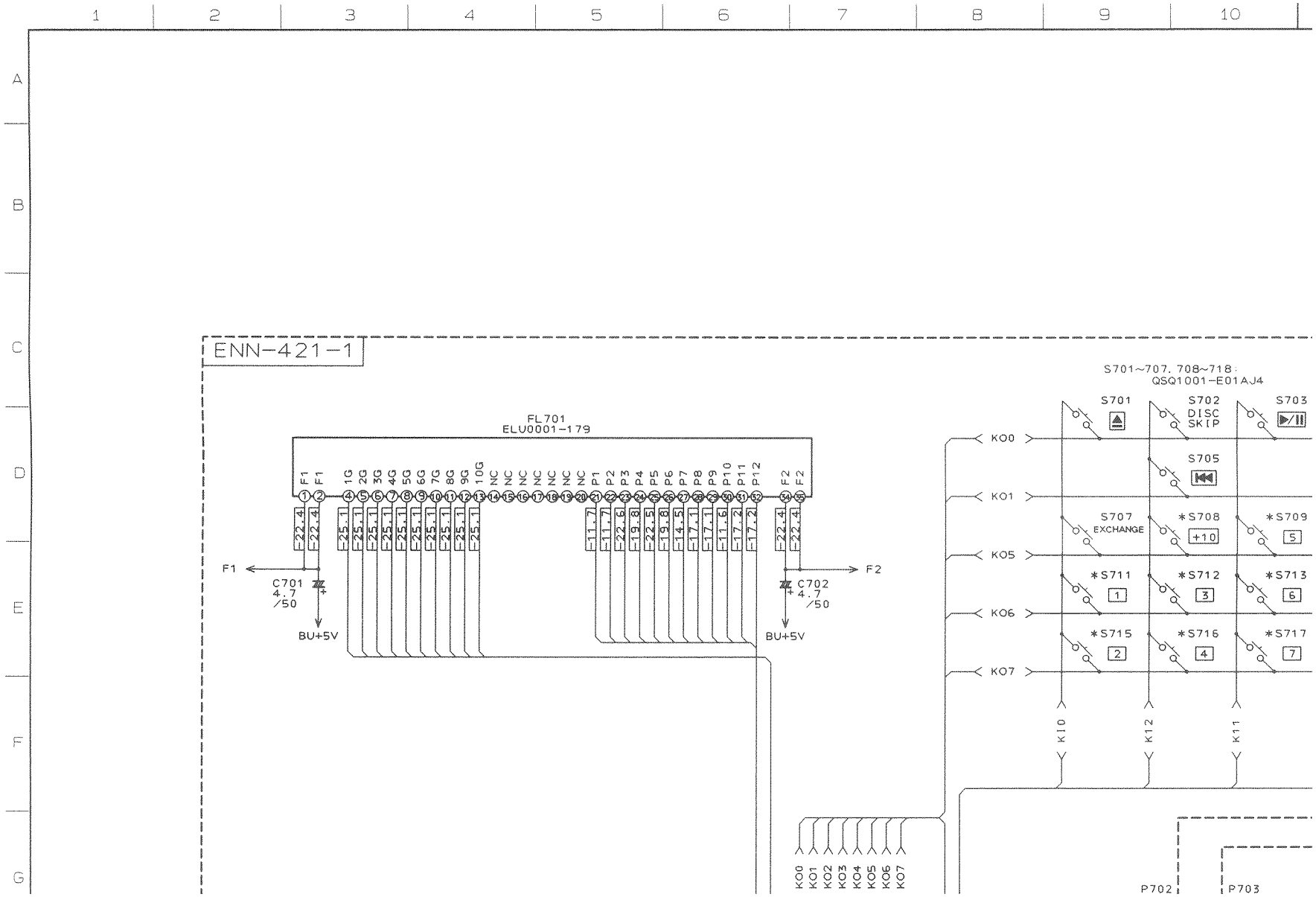
P-F.S-c P-F.S-d

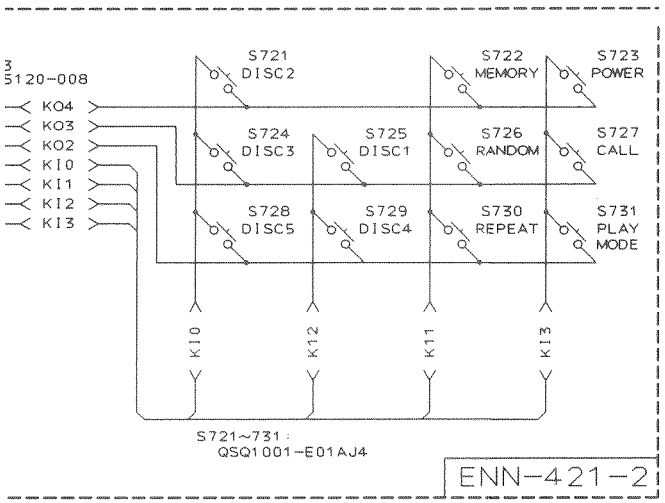


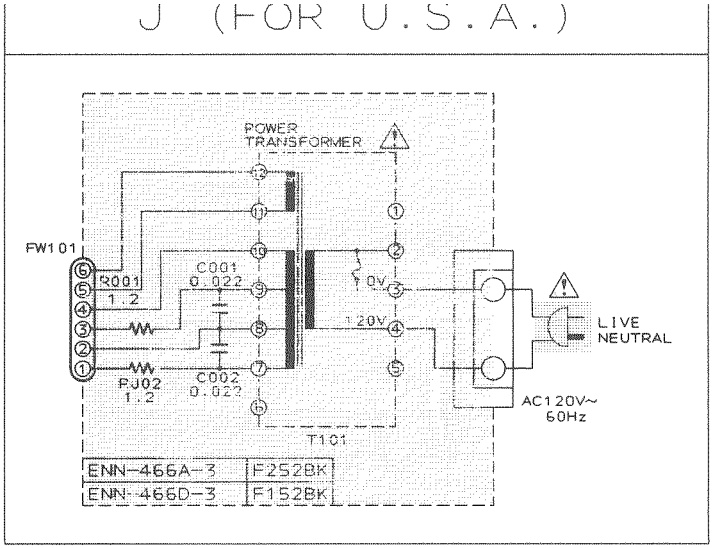
*MARK	F252BK	F152BK
C703	USED	NONE
IC701		
W116	NONE	USED
S708~718	USED	NONE
D707, 708	1SS133	NONE

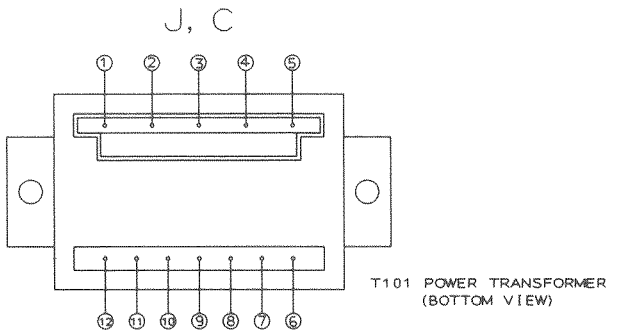
ENN-421-1

■ Front Section

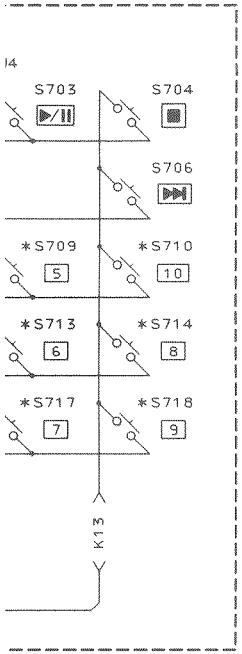



3
5120-008
KO4
KO3
KO2
KI0
KI1
KI2
KI3
S721
DISC2
S722
MEMORY
S723
POWER
S724
DISC3
S725
DISC1
S726
RANDOM
S727
CALL
S728
DISC5
S729
DISC4
S730
REPEAT
S731
PLAY
MODE
K10
K12
K11
K13
S721~731 :
QSQ1001-E01AJ4
ENN-421-2

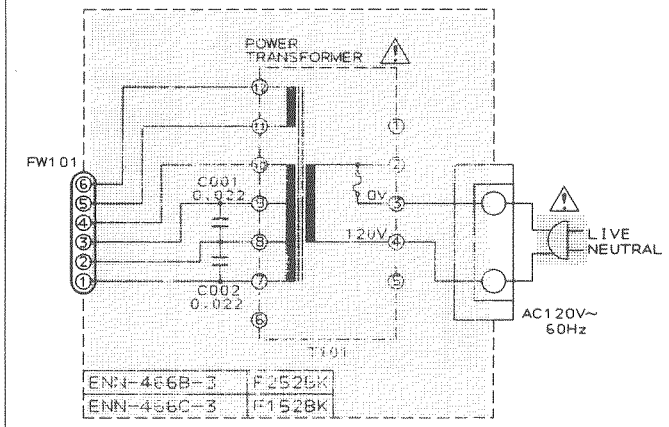

J (FOR U.S.A.)
POWER
TRANSFORMER
FW101
R001
1.2
C001
0.022
R002
1.2
C002
0.022
T101
10V
120V
LIVE
NEUTRAL
AC120V~
60Hz
ENN-466A-3
F252BK
ENN-466D-3
F152BK


J, C
T101 POWER TRANSFORMER
(BOTTOM VIEW)

11	12	13	14	15	16	17	18	19	20



C (FOR CANADA)

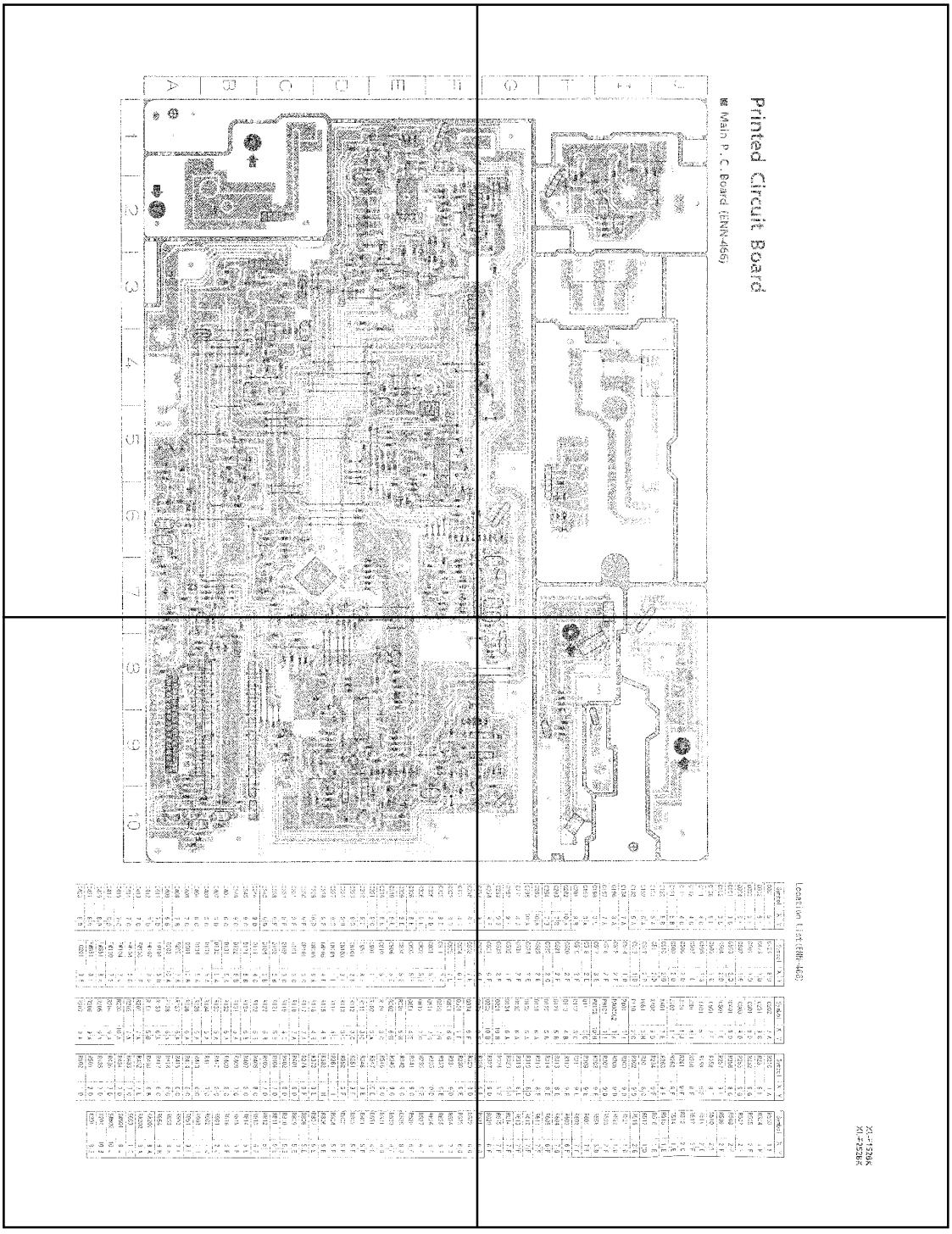


J (FOR U.S.A.)

S721 S722 S723

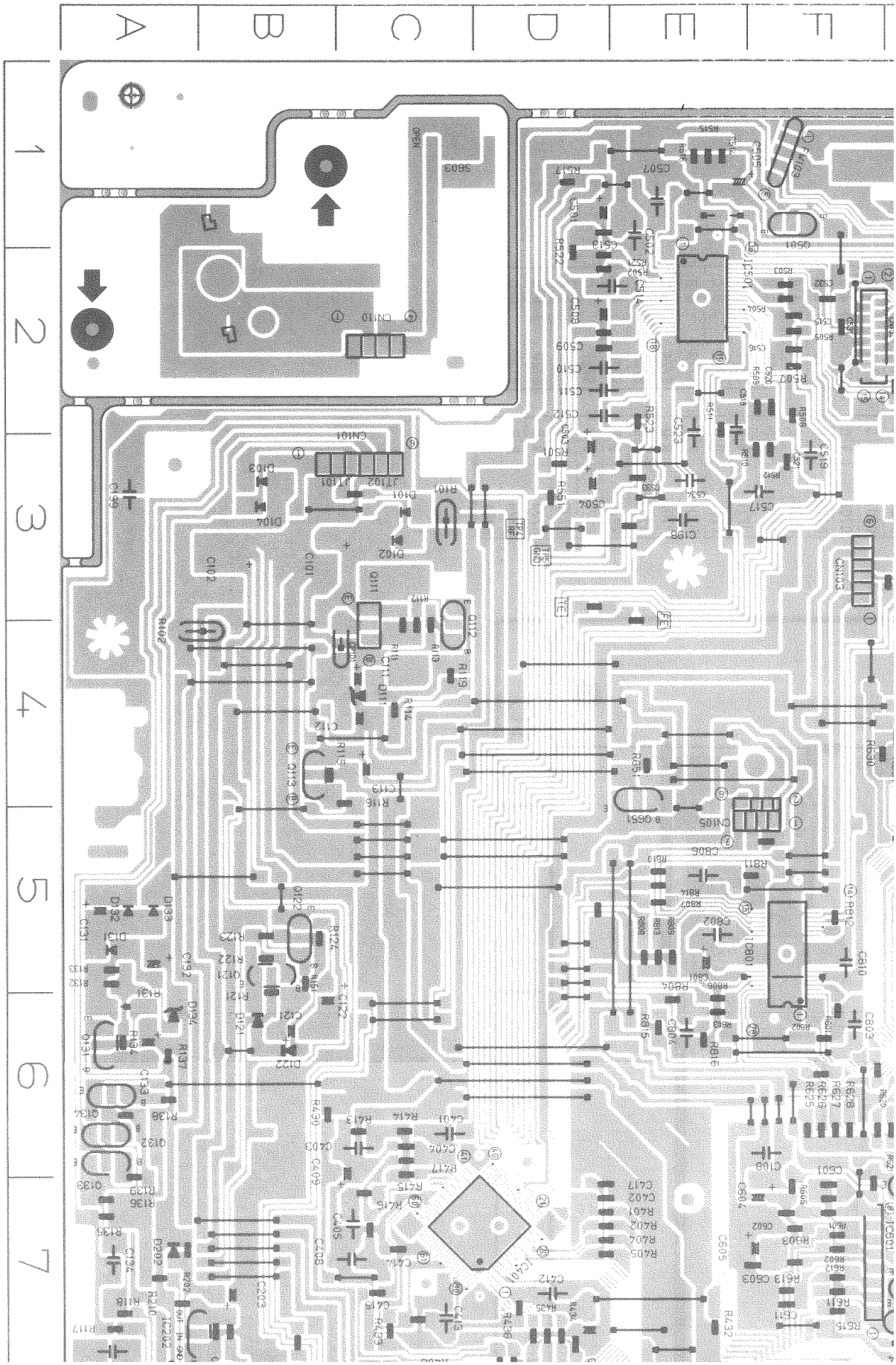
P-P.C.B-a

P-P.C.B-b



P-P.C.B-c

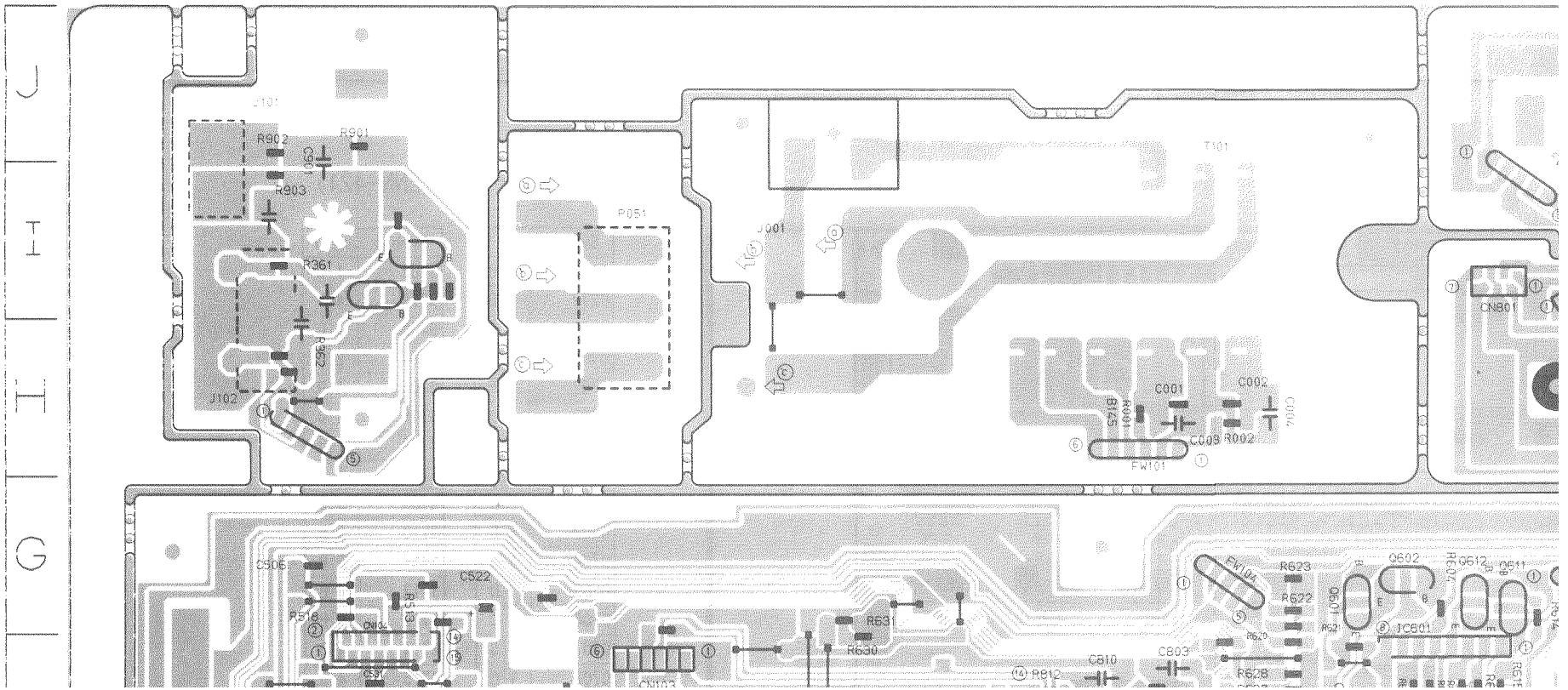
P-P.C.B-d

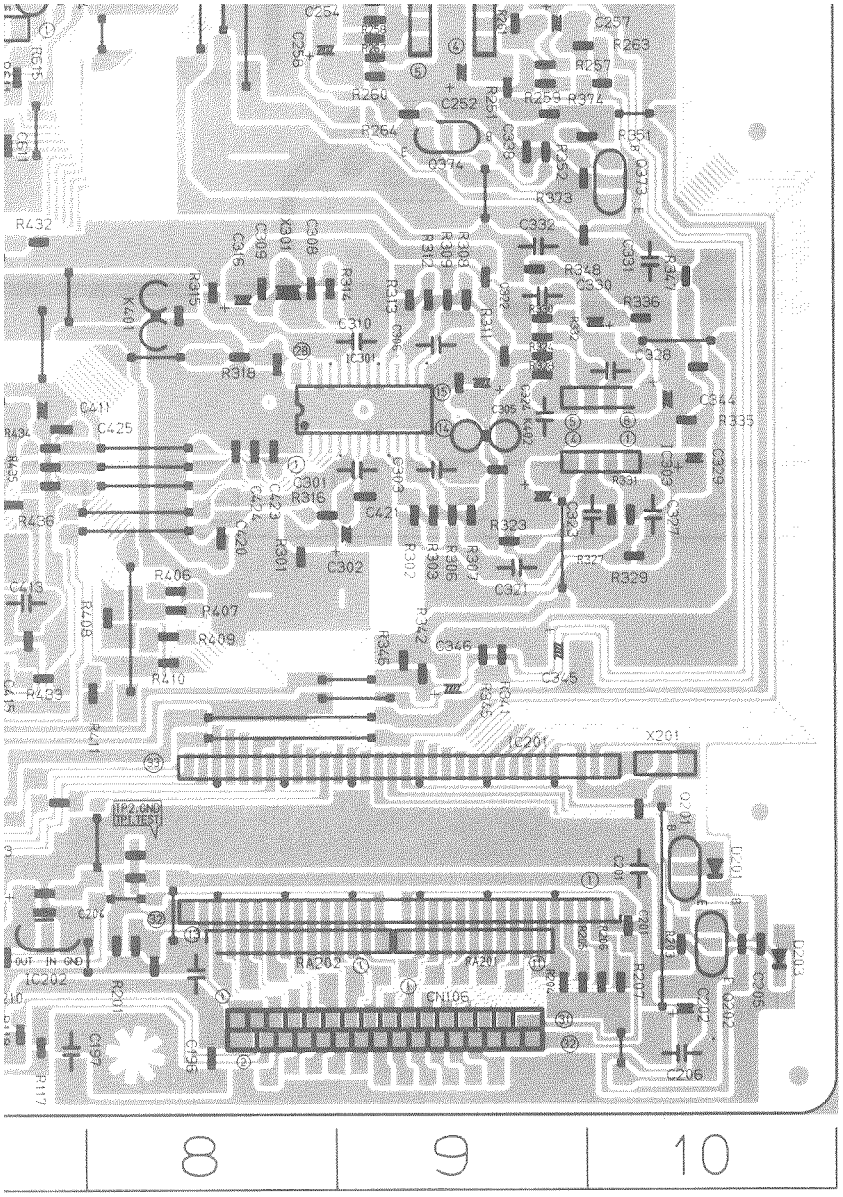


P-P.C.B-a

Printed Circuit Board

■ Main P . C . Board (ENN-466)





C257	9	F
C258	8	F
C301	8	D
C302	8	D
C303	9	D
C305	9	D
C306	9	E
C308	8	E
C309	8	E
C310	8	E
C316	8	E
C321	9	C
C322	9	E
C323	9	D
C324	9	D
C327	9	D
C328	9	E
C329	10	D
C330	9	E
C331	9	E
C332	9	E
C338	9	F
C343	9	D
C344	9	D
C345	9	C
C346	9	C
C401	6	C
C402	6	D
C403	6	C
C404	6	C
C405	7	C
C408	7	B
C409	6	B
C411	7	D
C412	7	D
C413	7	C
C414	7	C
C415	7	C
C417	6	D
C420	8	D
C421	8	D
C423	8	D

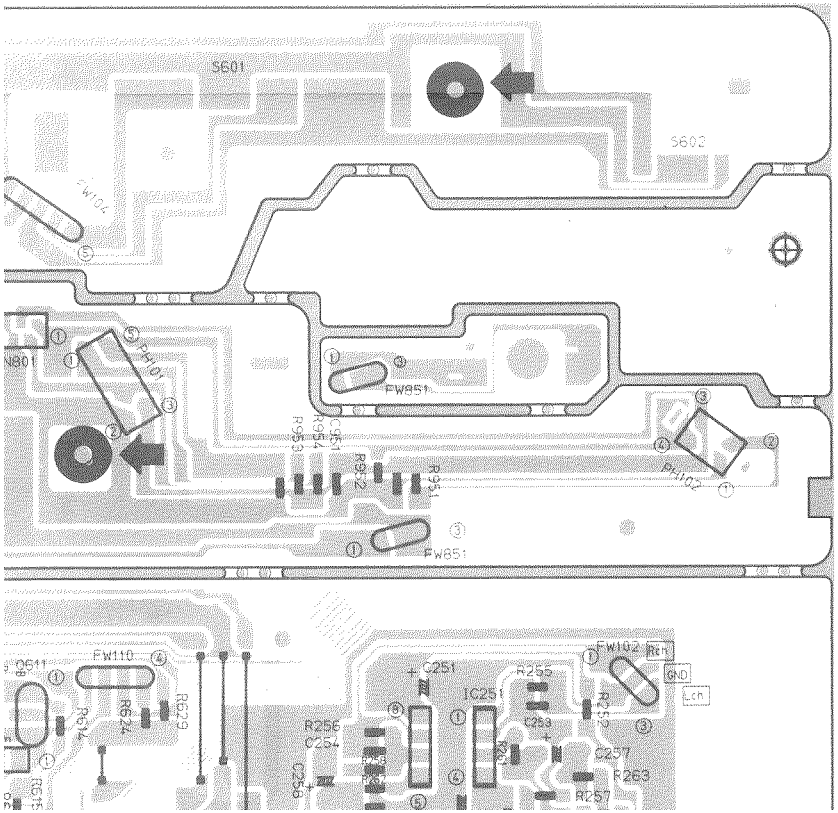
C602	6	F
C603	7	E
C604	6	F
C605	7	E
C611	7	F
C801	5	E
C802	5	E
C803	5	F
C804	5	E
C806	5	E
C810	5	F
C901	1	I
C951	8	H
CN101	2	B
CN103	3	F
CN104	1	F
CN105	4	E
CN106	9	A
CP101	3	C
D101	3	C
D102	3	C
D103	2	B
D104	3	B
D111	4	C
D121	5	B
D122	6	B
D131	5	A
D132	5	A
D133	5	A
D134	5	A
D201	10	B
D202	7	A
D203	10	A
FW101	5	H
FW102	9	G
FW103	1	F
FW104	6	G
FW104	7	J
FW110	7	G
FW851	8	H
FW851	8	H
IC201	9	B

Q373	9	F
Q374	9	F
Q501	1	F
Q601	6	G
Q602	7	G
Q611	7	G
Q612	7	G
Q651	4	E
R001	5	H
R002	6	H
R101	3	C
R102	3	A
R111	3	C
R112	3	C
R113	3	C
R114	4	C
R115	4	B
R116	4	B
R117	7	A
R118	7	A
R119	4	C
R121	5	B
R122	5	B
R123	5	B
R124	5	B
R131	5	A
R132	5	A
R133	5	A
R134	6	A
R135	6	A
R136	6	A
R137	6	A
R138	6	A
R139	6	A
R151	5	B
R201	7	A
R202	7	A
R203	10	A
R204	9	A
R205	9	A
R206	9	A
R207	9	A

R328	9	E
R329	9	D
R330	9	E
R331	9	D
R332	9	E
R335	10	D
R336	9	E
R341	9	C
R342	9	C
R345	9	C
R346	8	C
R347	10	E
R348	9	E
R351	9	F
R352	9	F
R361	1	I
R362	1	H
R373	9	E
R374	9	F
R401	6	D
R402	6	D
R404	7	D
R405	7	D
R406	8	C
R407	8	C
R408	7	C
R409	8	C
R410	8	C
R411	7	C
R413	6	C
R414	6	C
R415	6	C
R416	6	C
R417	6	C
R430	6	B
R432	7	E
R433	7	C
R434	7	D
R435	7	D
R436	7	D
R501	2	D
R502	1	D

R621	6	G
R622	6	G
R623	6	G
R624	7	G
R625	6	F
R626	6	F
R627	6	F
R628	6	F
R629	8	G
R630	4	F
R631	4	G
R651	4	E
R801	5	F
R802	5	F
R803	5	E
R804	5	E
R806	5	E
R807	5	E
R808	5	E
R809	5	E
R810	5	E
R811	5	E
R812	5	F
R813	5	E
R814	5	E
R815	5	E
R816	6	E
R901	2	J
R902	1	J
R903	1	I
R951	9	H
R952	8	H
R953	8	H
R954	8	H
RA201	8	A
RA202	8	A
S603	1	C
SW601	8	J
SW602	10	J
X201	10	B
X301	8	E

P-P.C.B-c



Location List(ENN-466)

Symbol	X	Y
C001	5	H
C002	6	H
C003	5	H
C004	6	H
C101	3	B
C102	3	B
C108	6	F
C111	4	C
C112	4	C
C113	4	C
C121	5	B
C122	5	B
C131	5	A
C132	5	A
C133	5	A
C134	7	A
C196	8	A
C197	7	A
C198	3	E
C199	3	A
C201	9	B
C202	10	A
C203	7	B
C204	7	B
C205	10	A
C206	10	A
C251	8	G
C252	9	F
C253	9	G
C254	8	F
C257	9	F
C258	8	F

Symbol	X	Y
C424	8	D
C425	7	D
C501	1	D
C502	1	E
C503	2	D
C504	2	D
C505	1	E
C506	1	G
C507	1	E
C508	2	D
C509	2	D
C510	2	D
C511	2	D
C512	2	D
C513	1	D
C514	1	D
C515	2	F
C516	2	F
C517	3	E
C518	2	E
C519	2	F
C520	2	F
C521	2	F
C522	2	G
C523	2	E
C524	2	E
C531	2	F
C532	1	F
C533	2	E
C601	6	F
C602	6	F
C603	7	E

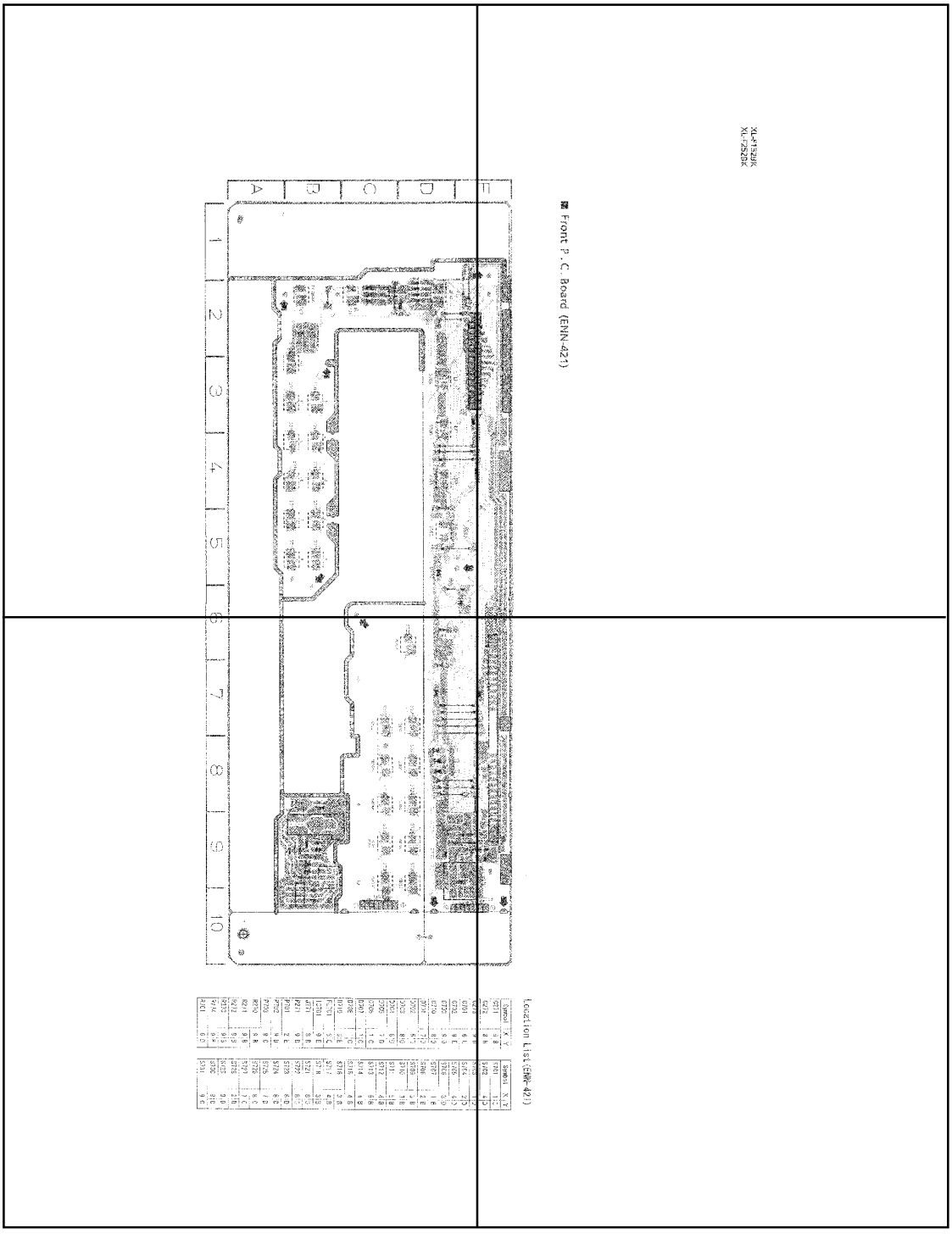
Symbol	X	Y
IC202	7	A
IC251	9	G
IC301	8	D
IC303	9	D
IC401	6	D
IC501	1	E
IC601	7	F
IC801	5	F
J001	4	J
J101	1	J
J102	1	H
K401	7	E
K402	9	D
P051	3	H
P110	2	C
P801	7	I
PA00062	7	A
PH101	7	I
PH102	10	H
Q111	3	C
Q112	3	C
Q113	4	B
Q121	5	B
Q122	5	B
Q131	6	A
Q132	6	A
Q133	6	A
Q134	6	A
Q201	10	B
Q202	10	B
Q373	9	F
Q374	9	F

Symbol	X	Y
R210	7	A
R251	9	F
R252	9	G
R255	9	G
R256	8	G
R257	9	F
R258	8	F
R259	9	F
R260	8	F
R261	9	F
R262	8	F
R263	9	F
R264	9	F
R301	8	C
R302	9	D
R303	9	D
R306	9	D
R307	9	D
R308	9	E
R309	9	E
R311	9	E
R312	9	E
R313	8	E
R314	8	E
R315	8	E
R316	8	D
R318	8	E
R323	9	D
R324	9	E
R327	9	D
R328	9	E
R329	9	D

Symbol	X	Y
R503	1	F
R504	1	F
R505	2	F
R507	2	F
R508	2	F
R509	2	F
R510	2	F
R511	2	E
R512	2	F
R513	2	G
R514	1	E
R515	1	E
R516	1	E
R517	1	D
R518	2	G
R521	1	D
R522	1	D
R523	2	E
R551	3	D
R601	7	F
R602	7	F
R603	6	F
R604	7	G
R605	6	F
R611	7	F
R612	7	F
R613	7	F
R614	7	F
R615	7	F
R620	6	F
R621	6	G
R622	6	G

P-F.P.C.B-a

P-F.P.C.B-b



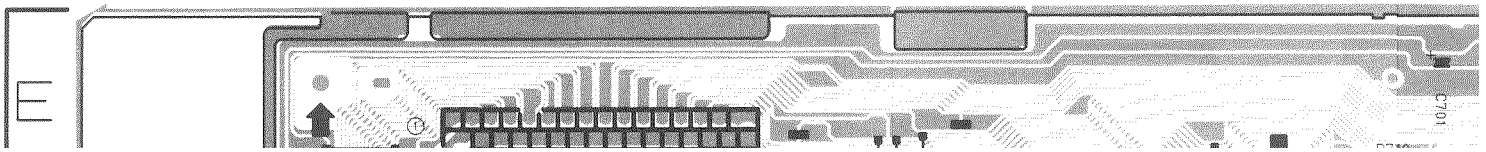
P-F.P.C.B-c

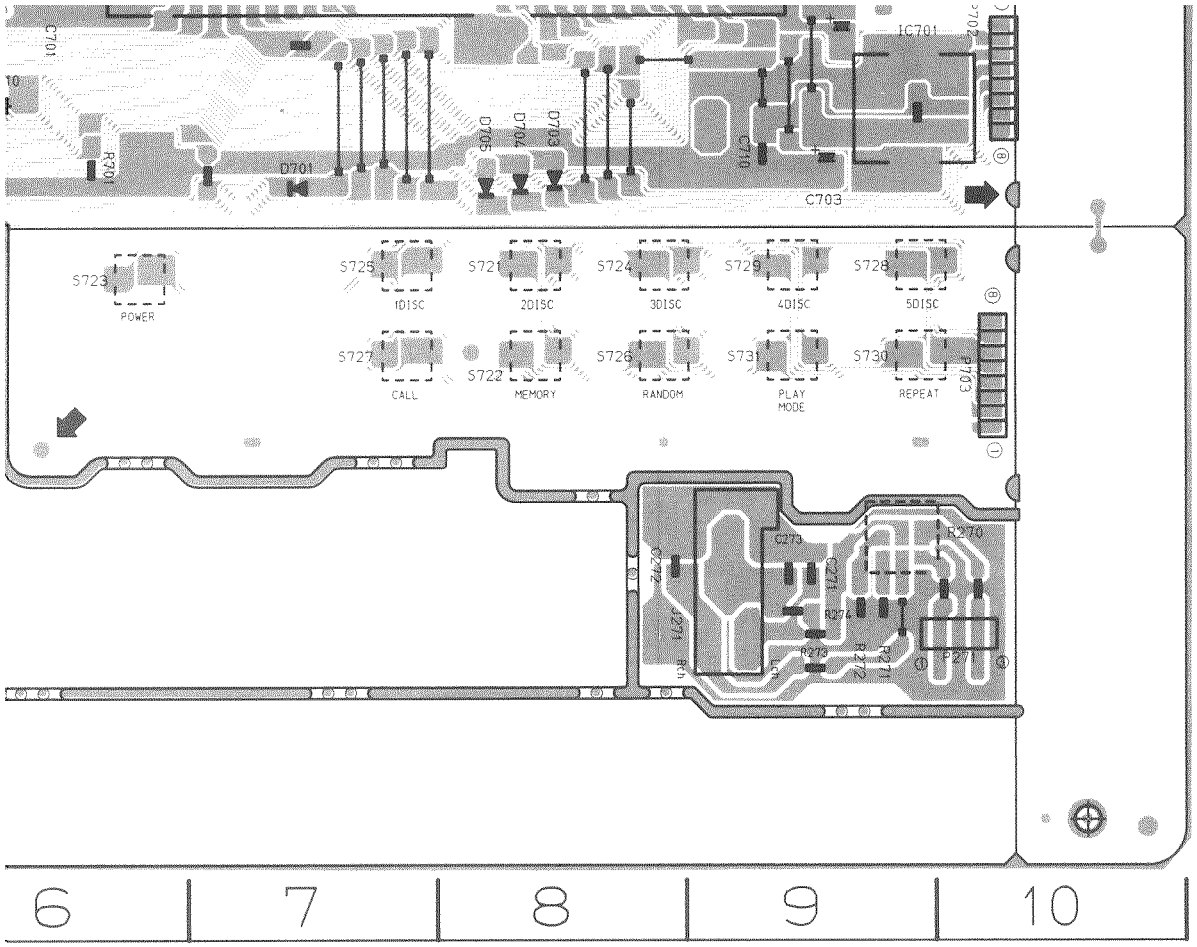
P-F.P.C.B-d

A
B
C
D
E
1
2
3
4
5
6
EX CHANGE
S707
S701
D707
D706
C706
S708
S709
S710
S711
S712
S713
S714
S715
S716
S717
S718
S704
S706
S705
S702
DISC SKIP
D702
D701
C701
P701

P-F.P.C.B-a

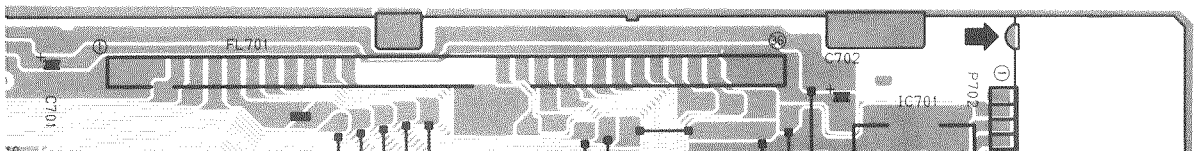
■ Front P . C . Board (ENN-421)





C272	8	B
C273	9	B
C701	6	E
C702	9	E
C703	9	D
C710	8	D
D701	7	D
D702	5	D
D703	8	D
D704	8	D
D705	7	D
D706	1	C
D707	1	C
D708	1	C
D710	6	E
FL701	6	E
IC701	9	E
J271	8	B
P271	9	B
P701	2	E
P702	9	D
P703	9	C
R270	9	B
R271	9	B
R272	9	B
R273	9	B
R274	9	B
R701	6	D

S702	4	D
S703	1	D
S704	2	D
S705	4	D
S706	3	D
S707	1	B
S708	2	B
S709	3	B
S710	3	B
S711	5	B
S712	4	B
S713	5	B
S714	4	B
S715	4	B
S716	3	B
S717	4	B
S718	3	B
S721	8	D
S722	8	C
S723	6	D
S724	8	D
S725	7	D
S726	8	C
S727	7	C
S728	9	D
S729	9	D
S730	9	C
S731	9	C



Location List(ENN-421)

Symbol	X	Y
C271	9	B
C272	8	B
C273	9	B

Symbol	X	Y
S701	1	C
S702	4	D
S703	1	D

Parts List

* All printed circuit boards and its assemblies are not available as service parts.

The Markes for Dasignated Areas.

J ・・・ the U.S.A. U ・・・ Universal Type
No mark indicates all areas.

- Contens -

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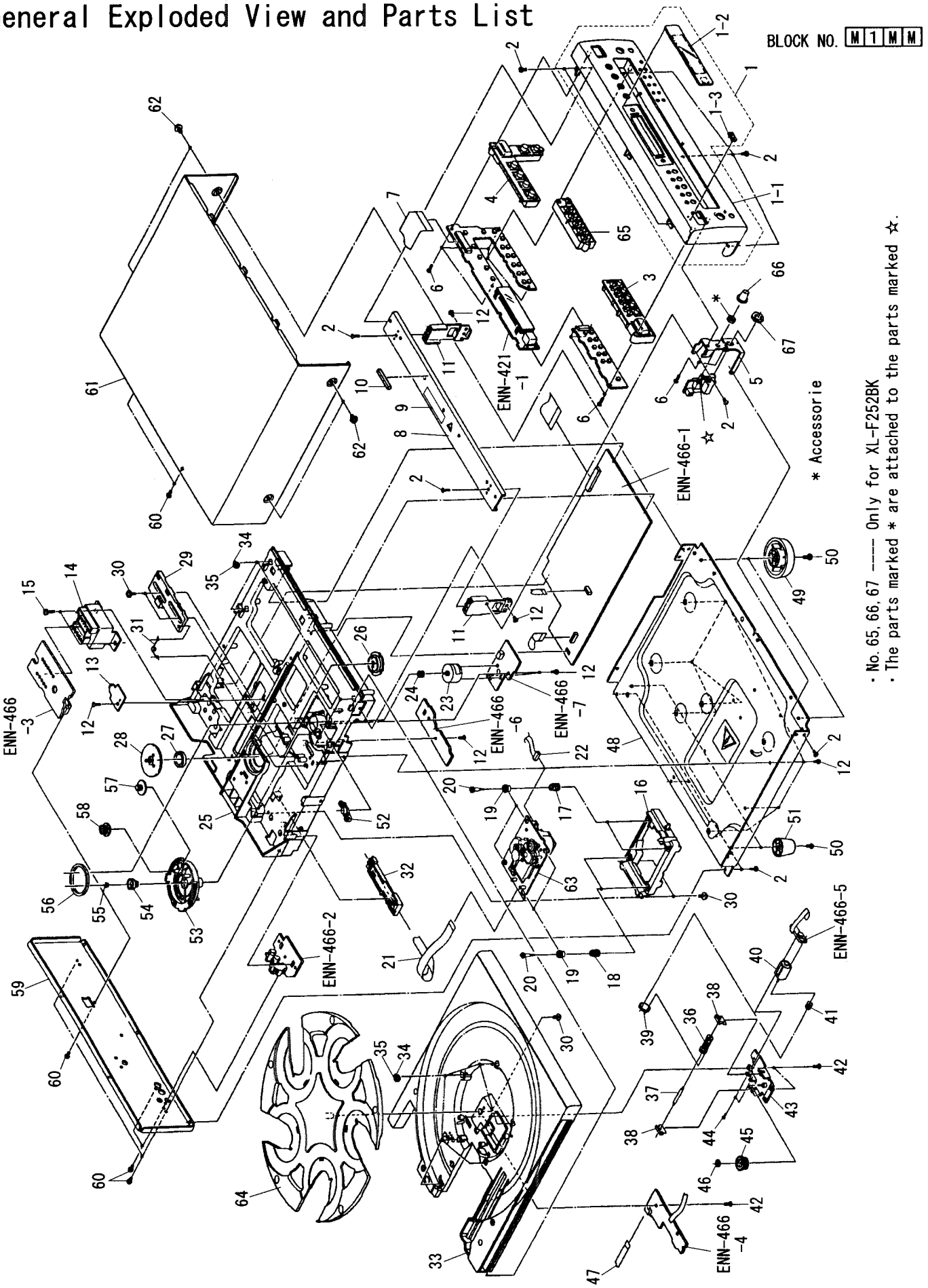


■ Parts List (XL-F152BK)

Block No. M 1 M M

⚠	No.	Parts Number	Parts Name	Q'ty	Description	Area
	1	FEP-XLF152BKJ(S	FRONT PANEL ASSY	1		
	1-1	E102893-009SS	FRONT PANEL	1		
	1-2	E308113-012SS	WINDOW SCREEN	1		
	1-3	VJD5429-001	JVC MARK	1		
	2	SDSG3006Z	TAPPING SCREW	12		
	3	E208219-004SS	POWER BUTTON	1		
	4	E208221-004SS	PUSH BUTTON	1	PLAY/PAUSE	
	5	E309048-001	H.P. BRACKET	1		
	6	SDSF2608Z	SCREW	9		
	7	VWF1232-25TTB	FLAT WIRE ASSY	1		
	8	E207495-001SS	MECHA FLAME	1		
	9	E406709-001	CAUTION LABEL	1		C
	10	E306805-138	SPACER	1		
	11	E308111-002SS	STAY BRACKET	2		
	12	SBSF3008Z	TAPPING SCREW	14		
	13	E408395-001	PROTECT COVER	1		
⚠	14	ETP1000-77JAJ	POWER TRANSFORMER	1		
	15	SBSF4008Z	TAPPING SCREW	2		
	16	E208210-002SS	ELEVATOR BASE	1		
	17	E407154-003	SPRING	2		
	18	E407154-002	SPRING	2		
	19	E407153-001	INSULATOR	4		
	20	E407146-001	SPECIAL SCREW	4		
	21	EWPZ02-001	FFC CABLE	1	15PIN	
	22	EWS266-B409	SOCKET WIRE ASSY	1	6PIN	
	23	RF-500TB-12560	DC MOTOR	1		
	24	E75984-222SS	MOTOR PULLEY	1		
	25	E102883-001	C.D MECHA BASE	1		
	26	E306835-221	CD CLAMPER	1		
	27	E74897-002	MAGNET	1		
	28	E306836-223SS	YOKE PLATE	1		
	29	E208211-002SS	CAM PLATE	1		
	30	E65923-003	TAPPING SCREW	5		
	31	E408293-002	T.SPRING	1		
	32	E308181-221SS	FFC HOLDER	1		
	33	E102884-002	C.D TRAY	1		
	34	E407140-001SS	CD ROLLER	10		
	35	E407149-001SS	RUBBER TUBE	10		
	36	E408199-001	C.D PULLEY WORM	1		
	37	E408197-001	CD SHAFT	1		
	38	E408201-001	C.D SHAFT GUIDE	2		
	39	E75950-003	DRIVE BELT	1		
	40	FF-130SH-11340	DC MOTOR	1		
	41	E73060-001	MOTOR PULLEY	1		
	42	SDSF3008M	WOOD SCREW	3		
	43	E309030-001	BRACKET ASS'Y	1		
	44	SPSK2025Z	SCREW	2		
	45	E408200-001	C.D WORM WHEEL	1		
	46	WDL360850	WASHER	1		
	47	VWF1007-25PPA	FFC CABLE	1		
	48	E102595-003SSF	CD BOTTOM COVER	1		
	49	E406379-008SS	FOOT	2		
	50	SBST3008Z	TAPPING SCREW	4		

■ Parts List (XL-F152BK)

⚠	No.	Parts Number	Parts Name	Q'ty	Description	Area
	51	E47227-037	FOOT ASS'Y	2		
	52	E309020-001	SW LEVER	1		
	53	E309019-001	C.D D.BASE	1		
	54	E75985-222SS	PULLEY GEAR	1		
	55	E72024-001	SPEED NUT	1		
	56	E75950-002	REEL BELT	1		
	57	E408203-001	C.D GEAR	1		
	58	E408202-001	C.D D.GEAR	1		
	59	E208223-020SS	REAR PANEL	1		J
	59	E208223-022SS	REAR PANEL	1		C
	60	E73273-006	SPECIAL SCREW	7		
	61	E207496-002SS	METAL COVER	1		
	62	E406308-001	SPECIAL SCREW	4		
	63	----------	CD MECHANISM ASSY	1	SEE PAGE 2-5	
	64	E102885-002	C.D DISC TABLE	1		
	-	E307570-001	NUMBER LABEL	1		J
	-	E408632-002	CSA LABEL	1		C
	-	E61029-005	NUMBER LABEL	1		C

■ Parts List (XL-F252BK)

* This list describes only the difference between XL-F152BK and XL-F252BK.

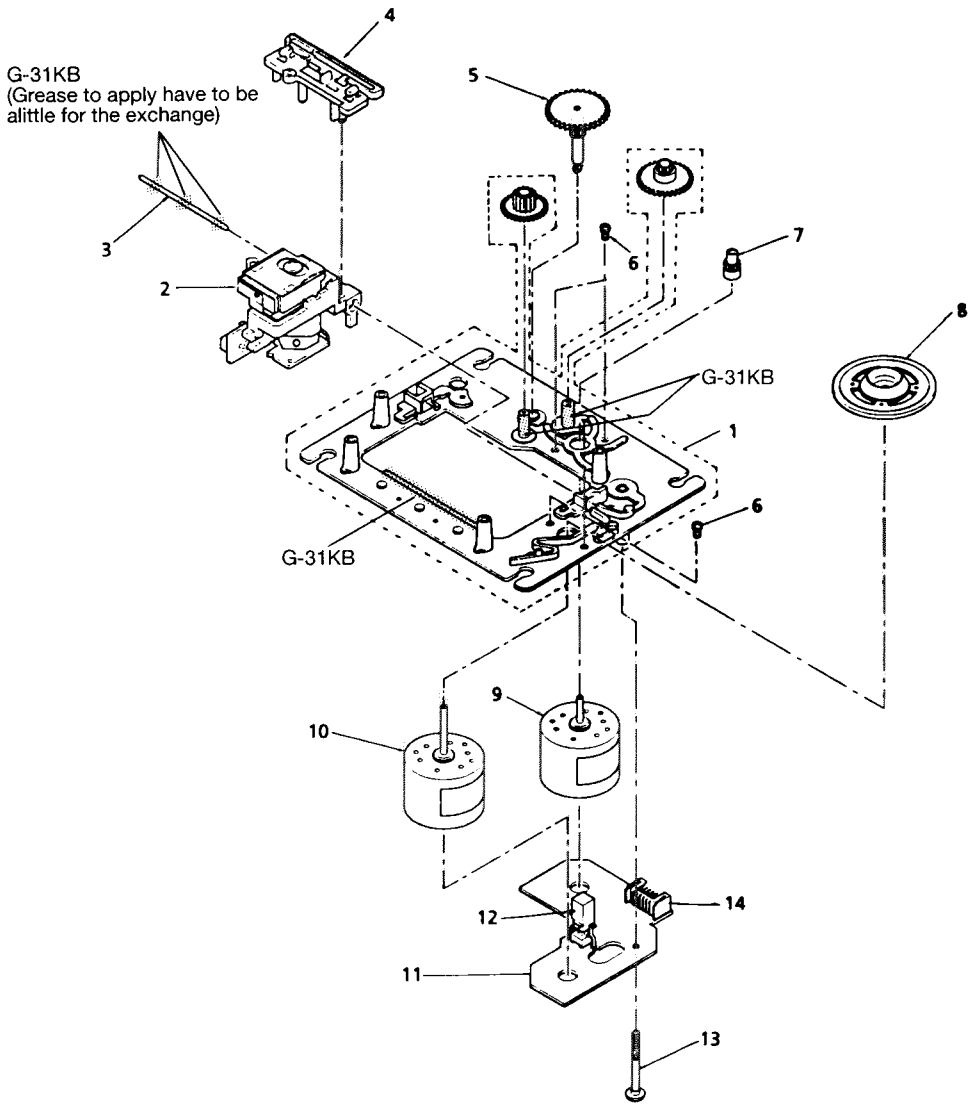
Block No. M 2 M M

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	1	EFP-XLF252BKJ(S	FRONT PANEL ASSY	1		
	1-1	E102893-008SS	FRONT PANEL	1		
	1-2	E308113-015SS	WINDOW SCREEN	1		
	6	SDSF2608Z	SCREW	10		
	12	SBSF3008Z	TAPPING SCREW	16		
	59	E208223-019SS	REAR PANEL	1		J
		E208223-021SS	REAR PANEL	1		C
	65	E309047-003SS	PUSH BUTTON	1	10KEY	
	66	E309097-004	KNOB	1	H.P VOLUME	
	67	E408582-001	NUT	1		

CD Mechanism Ass'y and Parts List

Block No. M 3 M M

■ Grease Point



■ Parts List (CD Mechanism Ass'y)

Block No. M 3 M M

Item	Part Number	Part Name	Q'ty	Description	Area
1	E102501-221SS	MECHANISM BASE ASSY	1		
2	OPTIMA-6S	PICK UP ASSY	1		
3	E406777-001	SHAFT	1		
4	E307746-001	CD RACK	1		
5	E307745-221SS	GEAR (3)	1		
6	SDSP2003N	SCREW	4		
7	E406750-001	PINION GEAR	1		
8	E75807-302	TURN TABLE	1		
9	MDN-4RA3ETA-1	FEED MOTOR	1		
10	E406783-001	SPINDLE MOTOR	1		
11	EMW10190-001(S)	CIRCUIT BOARD	1		
12	ESB1100-005	LEAF SWITCH	1		
13	E75832-001	SCREW	1		
14	EMV5109-006B	PLUG ASSY	1	6PIN	

■ Electrical Parts List (ENN-466)

⚠	No.	Parts Number	Description	Area
		I.C.S		
	IC201	MN171602JYK2	I.C(MICRO-COMPUTER)	
	IC202	PST9140T	I.C(MONO-ANALOG)	
	IC301	MN35503	I.C(DIGI-MOS)	
	IC303	NJM4580DD	I.C(MONO-ANALOG)	
	IC401	MN662720RB	I.C(DIGI-MOS)	
	IC501	AN8806SB	I.C(MONO-ANALOG)	
	IC601	NJM4580L	I.C(MONO-ANALOG)	
	IC801	BA6897FPW	I.C(MONO-ANALOG)	
		DIODES		
	D101	1SR35-200A	SI.DIODE	
	D102	1SR35-200A	SI.DIODE	
	D103	1SR35-200A	SI.DIODE	
	D104	1SR35-200A	SI.DIODE	
	D111	MTZ5.6JA	ZENER DIODE	
	D121	1SS133	SI.DIODE	
	D131	1SR35-200A	SI.DIODE	
	D132	1SR35-200A	SI.DIODE	
	D133	1SR35-200A	SI.DIODE	
	D134	MTZ30JC	ZENER DIODE	
	D201	1SS133	SI.DIODE	
	D202	1SS133	SI.DIODE	
	D203	1SS133	SI.DIODE	
		TRANSISTORS		
	Q111	2SB1565(E,F)	SI.TRANSISTOR	
	Q112	2SD1302	SI.TRANSISTOR	
	Q113	2SB1357(E,F)	SI.TRANSISTOR	
	Q121	2SA933S(RS)	SI.TRANSISTOR	
	Q122	DTC114YS	DIGITAL TRANSISTOR	
	Q131	2SA933S(RS)	SI.TRANSISTOR	
	Q132	2SD1302	SI.TRANSISTOR	
	Q133	2SD1302	SI.TRANSISTOR	
	Q134	DTA114YS	DIGITAL TRANSISTOR	
	Q201	DTA114YS	DIGITAL TRANSISTOR	
	Q202	DTC144ES	DIGITAL TRANSISTOR	
	Q373	2SD1302	SI.TRANSISTOR	
	Q374	2SD1302	SI.TRANSISTOR	
	Q501	2SA950(O,Y)	SI.TRANSISTOR	
	Q601	2SC2060(Q,R)	SI.TRANSISTOR	
	Q602	2SA934(Q,R)	SI.TRANSISTOR	
	Q611	2SC2060(Q,R)	SI.TRANSISTOR	
	Q612	2SA934(Q,R)	SI.TRANSISTOR	
	Q651	2SC1740S(R,S)	SI.TRANSISTOR	
		CAPACITORS		
	C001	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C002	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C101	QETB1CM-228	2200MF 16V AL E.CAP.	
	C102	QETB1CM-477M	470MF 16V E.CAP.	
	C108	QCF21HP-223A	0.022MF 50V CER.CAP.	
	C111	QETB1HM-225	2.2MF 50V AL E.CAP.	
	C112	QETB1AM-476	47MF 10V E.CAP.	
	C113	QETB1AM-476	47MF 10V E.CAP.	
	C121	QETB1CM-227	220MF 16V AL E.CAP.	
	C122	QETB1CM-226	22MF 16V E.CAP.	

⚠	No.	Parts Number	Description	Area
	C131	QETB1EM-476	47MF 25V AL E.CAP.	
	C132	QETB1HM-476	47MF 50V E.CAP.	
	C133	QETB1HM-106	10MF 50V E.CAP.	
	C197	QCF21HP-223A	0.022MF 50V CER.CAP.	
	C199	QCF21HP-223A	0.022MF 50V CER.CAP.	J
	C201	QFV81HJ-224	0.22MF 50V THIN FILM CAP.	
	C202	QETB1AM-476	47MF 10V E.CAP.	
	C203	QETB1EM-106	10MF 25V AL E.CAP.	
	C204	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C205	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C301	QCZ0202-155	1.5MF 25V CER.RES.	
	C302	QETB0JM-227	220MF 6.3V E.CAP.	
	C303	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C305	QETB0JM-477	470MF 6.3V AL E.CAP.	
	C306	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C308	QCT30CH-180Y	18PF 50V CER.CAP.	
	C309	QCT30CH-180Y	18PF 50V CER.CAP.	
	C310	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C316	QETB1AM-476	47MF 10V E.CAP.	
	C321	QFN81HJ-392	3900PF 50V METAL.MYLAR	
	C322	QFN81HJ-392	3900PF 50V METAL.MYLAR	
	C323	QFN81HJ-333	0.033MF 50V MYLAR CAP.	
	C324	QFN81HJ-333	0.033MF 50V MYLAR CAP.	
	C327	QFP81HJ-181	180PF 50V POLYPROPY.FILM	
	C328	QFP81HJ-181	180PF 50V POLYPROPY.FILM	
	C329	QETB1EM-226N	22MF 25V E.CAP.	
	C330	QETB1EM-226N	22MF 25V E.CAP.	
	C331	QFN81HJ-103	0.01MF 50V METAL.MYLAR	
	C332	QFN81HJ-103	0.01MF 50V METAL.MYLAR	
	C338	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C343	QETB1EM-476	47MF 25V AL E.CAP.	
	C344	QETB1EM-476	47MF 25V AL E.CAP.	
	C401	QCS31HJ-471Z	470PF 50V CER.CAP.	
	C402	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C403	QFN81HJ-223	0.022MF 50V METAL.MYLAR	
	C404	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C405	QFV81HJ-334	0.33MF 50V TF.CAP.	
	C408	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C409	QETB1AM-476	47MF 10V E.CAP.	
	C411	QETB1AM-476	47MF 10V E.CAP.	
	C412	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C413	QCF21HP-223A	0.022MF 50V CER.CAP.	
	C414	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C415	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C417	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C420	QCSB1HJ-120Y	12PF 50V CER.CAP.	J
	C421	QCSB1HJ-120Y	12PF 50V CER.CAP.	J
	C425	QCSB1HJ-120Y	12PF 50V CER.CAP.	J
	C501	QETB1AM-107	100MF 10V AL E.CAP.	
	C502	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C504	QETB1AM-107	100MF 10V AL E.CAP.	
	C505	QER51EM-106	10MF 25V E.CAP.	
	C506	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C508	QETB1HM-105	1MF 50V AL E.CAP.	

■ Electrical Parts List (ENN-466)

⚠	No.	Parts Number	Description	Area
	C509	QCBB1HK-101Y	100PF 50V CER. CAP.	
	C510	QFN81HJ-273	0.027MF 50V METAL. MYLAR	
	C511	QFN81HJ-472	4700PF 50V MYLAR CAP.	
	C512	QFN81HJ-103	0.01MF 50V METAL. MYLAR	
	C514	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C515	QCHB1EZ-223	0.022MF 25V CER. CAP.	
	C517	QCF21HP-223A	0.022MF 50V CER. CAP.	
	C518	QCF21HP-223A	0.022MF 50V CER. CAP.	
	C519	QCS21HJ-271A	270PF 50V CER. CAP.	
	C520	QCSB1HJ-470	47PF 50V CER. CAP.	
	C521	QCGB1HK-102	1000PF 50V CER. CAP.	
	C522	QCF21HP-223A	0.022MF 50V CER. CAP.	
	C523	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C524	QFV81HJ-104	0.1MF 50V THIN FILM CAP.	
	C531	QCGB1HK-102	1000PF 50V CER. CAP.	
	C532	QCGB1HK-102	1000PF 50V CER. CAP.	
	C533	QCBB1HK-331Y	330PF 50V CER. CAP.	
	C601	QCBB1HK-101Y	100PF 50V CER. CAP.	
	C602	QCHB1EZ-223	0.022MF 25V CER. CAP.	
	C603	QCHB1EZ-223	0.022MF 25V CER. CAP.	
	C604	QETB1CM-476	47MF 16V AL E. CAP.	
	C605	QETB1CM-476	47MF 16V AL E. CAP.	
	C611	QCBB1HK-101Y	100PF 50V CER. CAP.	
	C803	QFN81HJ-273	0.027MF 50V METAL. MYLAR	
	C804	QFN81HJ-183	0.018MF 50V METAL. MYLAR	
	C806	QFN81HJ-273	0.027MF 50V METAL. MYLAR	
	C810	QCZ0202-155	1.5MF 25V CER. RES.	
	C951	QCHB1EZ-223	0.022MF 25V CER. CAP.	
		RESISTORS		
	R001	QRD161J-1R2YT	1.2 1/6W CARBON RES.	J
	R002	QRD161J-1R2YT	1.2 1/6W CARBON RES.	J
⚠	R101	PTH61G30BD2R2	FUSIBLE RES.	C
⚠	R102	PTH61G30BD2R2	FUSIBLE RES.	C
	R111	QRD161J-222	2.2K 1/6W CARBON RES.	
	R112	QRD161J-221	220 1/6W CARBON RES.	
	R113	QRD161J-221	220 1/6W CARBON RES.	
	R114	QRD161J-202	2K 1/6W CARBON RES.	
	R115	QRD161J-103	10K 1/6W CARBON RES.	
	R116	QRD161J-122	1.2K 1/6W CARBON RES.	
	R117	QRD167J-1R5	1.5 1/6W CARBON RES.	
	R118	QRD167J-1R5	1.5 1/6W CARBON RES.	
	R119	QRD161J-202	2K 1/6W CARBON RES.	
	R121	QRD161J-331	330 1/6W CARBON RES.	
	R122	QRD161J-123	12K 1/6W CARBON RES.	
	R122	QRD161J-273	27K 1/6W CARBON RES.	
	R123	QRD161J-183	18K 1/6W CARBON RES.	
	R123	QRD161J-273	27K 1/6W CARBON RES.	
	R124	QRD161J-221	220 1/6W CARBON RES.	
⚠	R131	QRZ0077-560	56 1/4W FUSIBLE RES.	C
	R132	QRD161J-362	3.6K 1/6W CARBON RES.	
	R133	QRD161J-362	3.6K 1/6W CARBON RES.	
	R134	QRD167J-121	120 1/6W CARBON RES.	
	R135	QRD161J-911	910 1/6W CARBON RES.	
	R136	QRD161J-911	910 1/6W CARBON RES.	

⚠	No.	Parts Number	Description	Area
	R137	QRD161J-103	10K 1/6W CARBON RES.	
	R138	QRD161J-103	10K 1/6W CARBON RES.	
	R139	QRD161J-103	10K 1/6W CARBON RES.	
	R139	QRD167J-562	5.6K 1/6W CARBON RES.	
	R151	QRD167J-153	15K 1/6W CARBON RES.	
	R201	QRD161J-103	10K 1/6W CARBON RES.	
	R202	QRD161J-102	1K 1/6W CARBON RES.	
	R203	QRD161J-472	4.7K 1/6W CARBON RES.	
	R204	QRD161J-103	10K 1/6W CARBON RES.	
	R205	QRD161J-103	10K 1/6W CARBON RES.	
	R206	QRD161J-103	10K 1/6W CARBON RES.	
	R207	QRD161J-103	10K 1/6W CARBON RES.	
	R210	QRD161J-472	4.7K 1/6W CARBON RES.	
	R301	QRD167J-560	56 1/6W CARBON RES.	
	R302	QRD161J-163	16K 1/6W CARBON RES.	
	R303	QRD161J-243	24K 1/6W CARBON RES.	
	R306	QRD161J-163	16K 1/6W CARBON RES.	
	R307	QRD161J-243	24K 1/6W CARBON RES.	
	R308	QRD161J-243	24K 1/6W CARBON RES.	
	R309	QRD161J-163	16K 1/6W CARBON RES.	
	R311	QRD161J-101	100 1/6W CARBON RES.	
	R312	QRD161J-243	24K 1/6W CARBON RES.	
	R313	QRD161J-163	16K 1/6W CARBON RES.	
	R314	QRD161J-271	270 1/6W CARBON RES.	
	R315	QRD161J-101	100 1/6W CARBON RES.	
	R316	QRD161J-271	270 1/6W CARBON RES.	
	R318	QRD161J-102	1K 1/6W CARBON RES.	
	R323	QRD167J-682	6.8K 1/6W CARBON RES.	
	R324	QRD167J-682	6.8K 1/6W CARBON RES.	
	R327	QRD161J-362	3.6K 1/6W CARBON RES.	
	R328	QRD161J-362	3.6K 1/6W CARBON RES.	
	R329	QRD161J-183	18K 1/6W CARBON RES.	
	R330	QRD161J-183	18K 1/6W CARBON RES.	
	R331	QRD161J-162	1.6K 1/6W CARBON RES.	
	R332	QRD161J-162	1.6K 1/6W CARBON RES.	
	R335	QRD161J-273	27K 1/6W CARBON RES.	
	R336	QRD161J-273	27K 1/6W CARBON RES.	
	R341	QRD161J-271	270 1/6W CARBON RES.	
	R342	QRD161J-271	270 1/6W CARBON RES.	
	R347	QRD161J-561	560 1/6W CARBON RES.	
	R348	QRD161J-561	560 1/6W CARBON RES.	
	R351	QRD161J-103	10K 1/6W CARBON RES.	
	R352	QRD161J-103	10K 1/6W CARBON RES.	
	R361	QRD161J-101	100 1/6W CARBON RES.	
	R362	QRD161J-101	100 1/6W CARBON RES.	
	R373	QRD161J-474	470K 1/6W CARBON RES.	
	R374	QRD161J-274	270K 1/6W CARBON RES.	
	R401	QRD161J-102	1K 1/6W CARBON RES.	
	R402	QRD161J-102	1K 1/6W CARBON RES.	
	R404	QRD161J-102	1K 1/6W CARBON RES.	
	R405	QRD161J-102	1K 1/6W CARBON RES.	
	R406	QRD161J-102	1K 1/6W CARBON RES.	
	R407	QRD161J-102	1K 1/6W CARBON RES.	
	R408	QRD161J-102	1K 1/6W CARBON RES.	

■ Electrical Parts List (ENN-466)

⚠	No.	Parts Number	Description		Area
	R409	QRD161J-102	1K	1/6W CARBON RES.	
	R410	QRD161J-102	1K	1/6W CARBON RES.	
	R411	QRD161J-102	1K	1/6W CARBON RES.	
	R413	QRD167J-155	1.5M	1/6W CARBON RES.	
	R414	QRD161J-683	68K	1/6W CARBON RES.	
	R416	QRD161J-331	330	1/6W CARBON RES.	
	R417	QRD161J-124	120K	1/6W CARBON RES.	
	R430	QRD161J-2R2	2.2	1/6W CARBON RES.	
	R432	QRD161J-2R2	2.2	1/6W CARBON RES.	
	R433	QRD161J-102	1K	1/6W CARBON RES.	
	R434	QRD161J-102	1K	1/6W CARBON RES.	
	R435	QRD161J-102	1K	1/6W CARBON RES.	
	R436	QRD161J-102	1K	1/6W CARBON RES.	
	R502	QRD167J-562	5.6K	1/6W CARBON RES.	
	R505	QRD161J-274	270K	1/6W CARBON RES.	
	R507	QRD167J-154	150K	1/6W CARBON RES.	
	R508	QRD161J-273	27K	1/6W CARBON RES.	
	R509	QRD161J-114	110K	1/6W CARBON RES.	
	R510	QRD161J-104	100K	1/6W CARBON RES.	
	R511	QRD161J-473	47K	1/6W CARBON RES.	
	R512	QRD167J-822	8.2K	1/6W CARBON RES.	
	R513	QRD167J-121	120	1/6W CARBON RES.	
	R514	QRD161J-470	47	1/6W CARBON RES.	
	R515	QRD161J-470	47	1/6W CARBON RES.	
	R516	QRD161J-470	47	1/6W CARBON RES.	
	R517	QRD161J-2R2	2.2	1/6W CARBON RES.	
	R518	QRD161J-910Y	91	1/6W CARBON RES.	
	R521	QRD161J-622	6.2K	1/6W CARBON RES.	
	R523	QRD161J-125	1.2M	1/6W CARBON RES.	
	R551	QRD161J-102	1K	1/6W CARBON RES.	
	R601	QRD161J-203	20K	1/6W CARBON RES.	
	R602	QRD161J-203	20K	1/6W CARBON RES.	
	R603	QRD167J-153	15K	1/6W CARBON RES.	
	R604	QRD167J-151	150	1/6W CARBON RES.	
	R605	QRD167J-153	15K	1/6W CARBON RES.	
	R611	QRD161J-183	18K	1/6W CARBON RES.	
	R612	QRD161J-183	18K	1/6W CARBON RES.	
	R613	QRD161J-243	24K	1/6W CARBON RES.	
	R614	QRD167J-151	150	1/6W CARBON RES.	
	R615	QRD161J-243	24K	1/6W CARBON RES.	
	R620	QRD167J-151	150	1/6W CARBON RES.	
	R621	QRD167J-151	150	1/6W CARBON RES.	
	R622	QRD167J-151	150	1/6W CARBON RES.	
	R623	QRD167J-151	150	1/6W CARBON RES.	
	R624	QRD167J-151	150	1/6W CARBON RES.	
	R625	QRD167J-562	5.6K	1/6W CARBON RES.	
	R626	QRD167J-562	5.6K	1/6W CARBON RES.	
	R627	QRD167J-562	5.6K	1/6W CARBON RES.	
	R628	QRD167J-562	5.6K	1/6W CARBON RES.	
	R629	QRD167J-562	5.6K	1/6W CARBON RES.	
	R630	QRD167J-562	5.6K	1/6W CARBON RES.	
	R631	QRD167J-151	150	1/6W CARBON RES.	
	R651	QRD161J-103	10K	1/6W CARBON RES.	
	R801	QRD161J-821	820	1/6W CARBON RES.	

⚠	No.	Parts Number	Description		Area
	R802	QRD167J-562	5.6K	1/6W CARBON RES.	
	R803	QRD161J-112	1.1K	1/6W CARBON RES.	
	R804	QRD167J-113	11K	1/6W CARBON RES.	
	R806	QRD161J-124	120K	1/6W CARBON RES.	
	R807	QRD167J-332	3.3K	1/6W CARBON RES.	
	R808	QRD167J-822	8.2K	1/6W CARBON RES.	
	R809	QRD167J-223	22K	1/6W CARBON RES.	
	R810	QRD161J-472	4.7K	1/6W CARBON RES.	
	R811	QRD167J-153	15K	1/6W CARBON RES.	
	R812	QRD161J-752	7.5K	1/6W CARBON RES.	
	R814	QRD161J-473	47K	1/6W CARBON RES.	
	R814	QRD161J-683	68K	1/6W CARBON RES.	
	R901	QRD161J-221	220	1/6W CARBON RES.	
	R902	QRD161J-221	220	1/6W CARBON RES.	
	R951	QRD161J-331	330	1/6W CARBON RES.	
	R952	QRD161J-123	12K	1/6W CARBON RES.	
	R953	QRD161J-331	330	1/6W CARBON RES.	
	R954	QRD161J-472	4.7K	1/6W CARBON RES.	
		OTHERS			
		EMW10593-004	PRINTED BOARD		
		E3400-431	FELT SPACER		
		E70306-001	HEAT SINK		
		SBSE3008Z	SCREW		
		VYH7653-002	I.C.SOCKET		
	J001	QMCB001-E03H	AC INLET		
	J101	QMS3501-020	PIN JACK		
	J102	EMN00YV-210A	PIN JACK		
	K402	ENZ8101-007	INDUCTOR		J
	S601	ESS1200-002	LEVER SWITCH		
	S602	ESS1200-002	LEVER SWITCH		
	S603	ESS1200-002	LEVER SWITCH		
	X201	ECX0060-000EM	CERAMIC RESONATOR		
	X301	VCX5016-934V	CRYSTAL		
	CN103	EMV5109-006A	CONNECT TERMINAL		
	CN104	EMV7144-015	F.P.C.PLUG		
	CN105	EMV7144-007	CONNECT TERMINAL		
	CN106	VMC0261-R32	CONNECT TERMINAL		
	CN110	EMV7122-004Z	CONNECT TERMINAL		
	CN801	EMV7144-007R	CONNECT TERMINAL		
⚠	CP101	ICP-N10	I.C.PROTECTOR		C
	FW101	EWR36D-13LS	CORD		
	FW103	EWR35D-25SS	FLAT WIRE ASSY		
	FW104	EWR35D-13LS	FLAT WIRE ASSY		
	FW110	EWR34D-16LS	FLAT WIRE ASSY		
	FW851	EWR33D-10SS	CORD		
	JT101	EMV7122-103	CONNECT TERMINAL		
	JT102	EMV7122-103	CONNECT TERMINAL		
	PH101	GP1A52HR	PHOTO SENSOR		
	PH102	GP2S28	PHOTO SENSOR		

■ Electrical Parts List (ENN-421)

⚠	No.	Parts Number	Description	Area
		DIODES		
	D701	1SS133	SI.DIODE	
	D702	1SS133	SI.DIODE	
	D703	1SS133	SI.DIODE	
	D704	1SS133	SI.DIODE	
	D705	1SS133	SI.DIODE	
	D706	1SS133	SI.DIODE	
	D710	SLH-56VCF07	L.E.D.	
		CAPACITORS		
	C273	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C701	QER51HM-475	4.7MF 50V AL E.CAP.	
	C702	QER51HM-475	4.7MF 50V AL E.CAP.	
		RESISTORS		
	R270	QVAB79C-E53CJ5	5K VARIABLE RE	
	R271	QRD161J-390	39 1/6W CARBON RES.	
	R272	QRD161J-390	39 1/6W CARBON RES.	
	R273	QRD161J-270	27 1/6W CARBON RES.	
	R274	QRD161J-270	27 1/6W CARBON RES.	
	R701	QRD161J-331	330 1/6W CARBON RES.	
		OTHERS		
		EMW10453-003	PRINTED BOARD	
		E306805-134	SPACER	
		E306904-001SS	DISPLAY HOLDER	
	J271	QMS6A40-E20G	HEADPHONE JACK	
	P271	EMV7112-003R	CONNECT TERMINAL	
	P701	VMC0261-R32	CONNECT TERMINAL	
	P702	EMV5120-008	CONNECT TERMINAL	
	P703	EMV7120-008	CONNECT TERMINAL	
	S701	QSQ1001-E01AJ4	PUSH SWITCH	
	S702	QSQ1001-E01AJ4	PUSH SWITCH	
	S703	QSQ1001-E01AJ4	PUSH SWITCH	
	S704	QSQ1001-E01AJ4	PUSH SWITCH	
	S705	QSQ1001-E01AJ4	PUSH SWITCH	
	S706	QSQ1001-E01AJ4	PUSH SWITCH	
	S707	QSQ1001-E01AJ4	PUSH SWITCH	
	S721	QSQ1001-E01AJ4	PUSH SWITCH	
	S722	QSQ1001-E01AJ4	PUSH SWITCH	
	S723	QSQ1001-E01AJ4	PUSH SWITCH	
	S724	QSQ1001-E01AJ4	PUSH SWITCH	
	S725	QSQ1001-E01AJ4	PUSH SWITCH	
	S726	QSQ1001-E01AJ4	PUSH SWITCH	
	S727	QSQ1001-E01AJ4	PUSH SWITCH	
	S728	QSQ1001-E01AJ4	PUSH SWITCH	
	S729	QSQ1001-E01AJ4	PUSH SWITCH	
	S730	QSQ1001-E01AJ4	PUSH SWITCH	
	S731	QSQ1001-E01AJ4	PUSH SWITCH	
	FL701	ELU0001-179	FLUORESCENT DISPLAY TUBE	

Accessories List ■ (XL-F152BK)

ブロックNo. M 4 M M

	No.	Parts Number	Parts Name	Q'ty	Description	Area
	1	E30580-2407A	INSTRUCTION BOOK	1		J
		E30580-2408A	INSTRUCTION BOOK	1		C
	2	QMP1E00-183J5	POWER CORD	1		
	3	EWP302-011	SIGNAL CORD	1		
	4	EWP805-012	PLUG WIRE ASSY	1		C
	5	EWP805-012	PLUG WIRE ASSY	1		J
	6	E309758-003	POLY BAG	1		
	7	BT-51006-1	REGISTER CARD	1		J
	8	BT-20044G	SAFETY SHEET	1		J
	9	BT-52002-1	WARRANTY CARD	1		C
	10	BT-20071B	SERVICE NETWORK	1		C

■ (XL-F252BK)

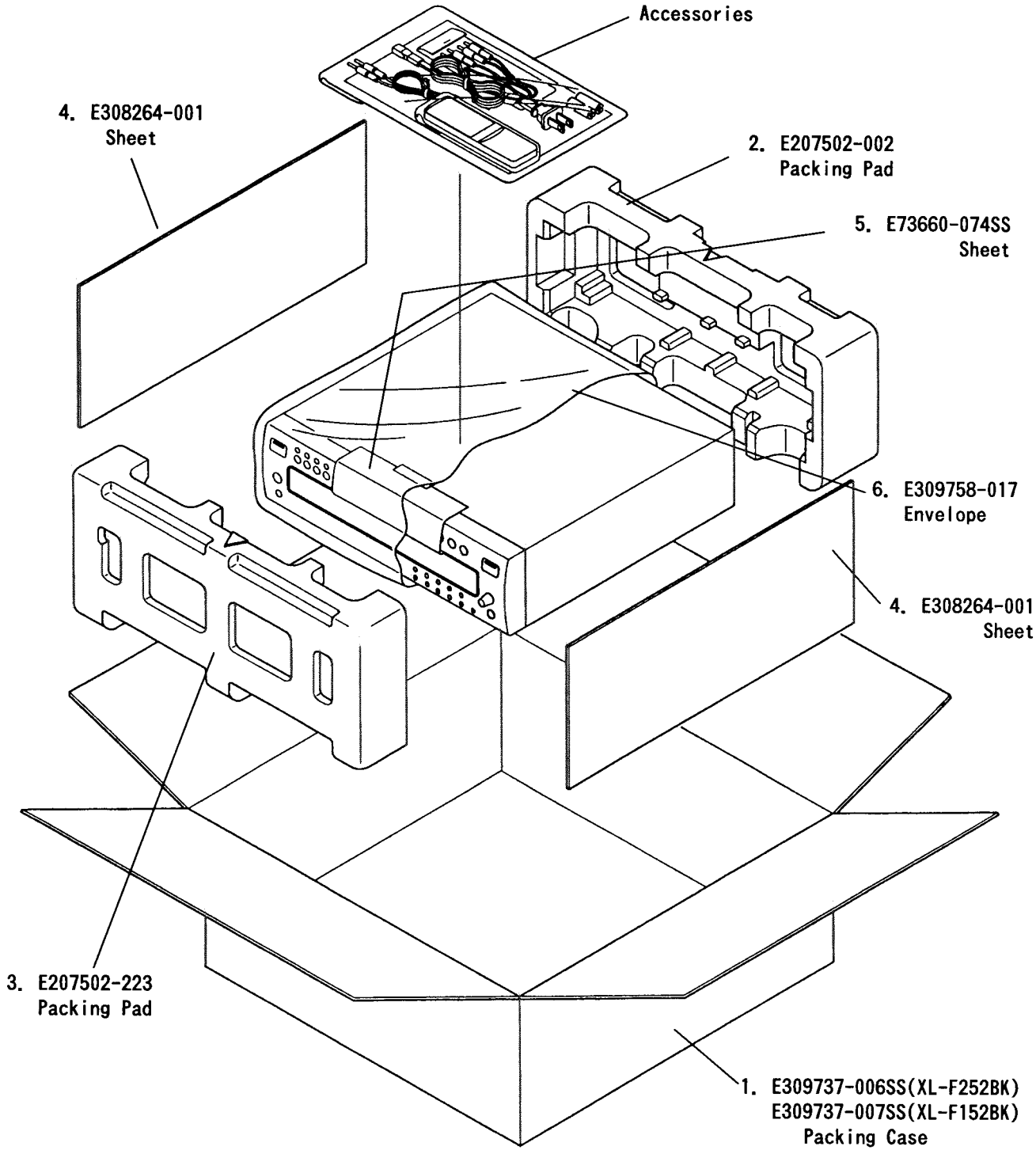
* This list describes only the difference between XL-F152BK and XL-F252BK.

ブロックNo. M 5 M M

⚠	Item	Part Number	Part Name	Q'ty	Description	Area
	4	EWP805-001	PLUG WIRE ASSY	1		
	11	RM-SX252U	REMOTE CONTROLER	1		
	12	UM-3(DJ)-2PSA	BATTERY	1		

Packing Materials and Part Numbers

Block No. M6MM



XL-F152BK
XL-F252BK

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO DIVISION, YAMATO PLANT, 1644, SHIMOTSURUMA, YAMATO-SHI, KANAGAWA-KEN, 242, JAPAN

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